REPORT RESUMES

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DROPOUTS--AN ANALYSIS OF PERSONAL VARIABLES WITHIN THE SCHOOL SITUATION.

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DESCRIPTORS- *DROPOUT RESEARCH, COCURRICULAR ACTIVITIES, *DROPOUT ATTITUDES, GRADING, FOLLOWUP STUDIES, APTITUDE TESTS, ACHIEVEMENT TESTS, INTELLIGENCE TESTS, SCHOOL AND COLLEGE ABILITY TEST, DIFFERENTIAL APTITUDE TEST, METROPOLITAN ACHIEVEMENT TEST, STANFORD ACHIEVEMENT TEST, MOONEY PROBLEM CHECKLIST, LORGE THORNDIKE INTELLIGENCE TEST

TO ISOLATE FACTORS RELATED TO EARLY SCHOOL LEAVING, DATA WAS OBTAINED ON ALL TWELFTH, EIGHTH, AND FOURTH GRADE STUDENTS IN THE SPOKANE PUBLIC SCHOOLS. ANALYZED WERE--(1) PERSONAL VARIABLES WITHIN THE SCHOOL SITUATION IN THE TWELFTH GRADE, (2) FACTORS ASSOCIATED WITH DROPOUTS IN THE EIGHTH GRADE, AND (3) CHARACTERISTICS OF FOURTH GRADE PUPILS IN TERMS OF DROPOUT ASSOCIATED FACTORS. VARIABLES INCLUDED THE FOLLOWING--INTELLIGENCE, SCHOLASTIC ACHIEVEMENT, SCHOOL ADJUSTMENT, SCHOOL RELATED EXPERIENCE, AND PERSONAL AND SOCIAL ADJUSTMENT. VERBAL FACILITY AND LANGUAGE SKILLS, STUDENT ATTITUDES TOWARD SCHOOL, AND PARTICIPATION IN COCURRICULAR ACTIVITIES EMERGED AS STRONG DETERMINANTS OF CONTINUANCE AND SUCCESS IN SCHOOL. STUDENTS WITH PARENTS IN HIGHER LEVEL OCCUPATIONS ALSO TENDED TO REMAIN IN SCHOOL LONGER. THE DATA INDICATES A NEED FOR MORE VOCATIONAL PLANNING ON THE TWELFTH GRADE LEVEL. VARIABLES CHARACTERIZING THE DROPOUT ARE COURSE FAILURES OR REPEATED GRADES, ATTENDANCE AT MORE SCHOOLS, AND POOR ATTENDANCE RECORDS. DATA COLLECTION WAS FACILITATED BY UNIFORM CUMULATIVE RECORDS. FOLLOWUP STUDIES OF THE TWELFTH, EIGHTH, AND FOURTH GRADE POPULATIONS ARE RECOMMENDED. (JB)

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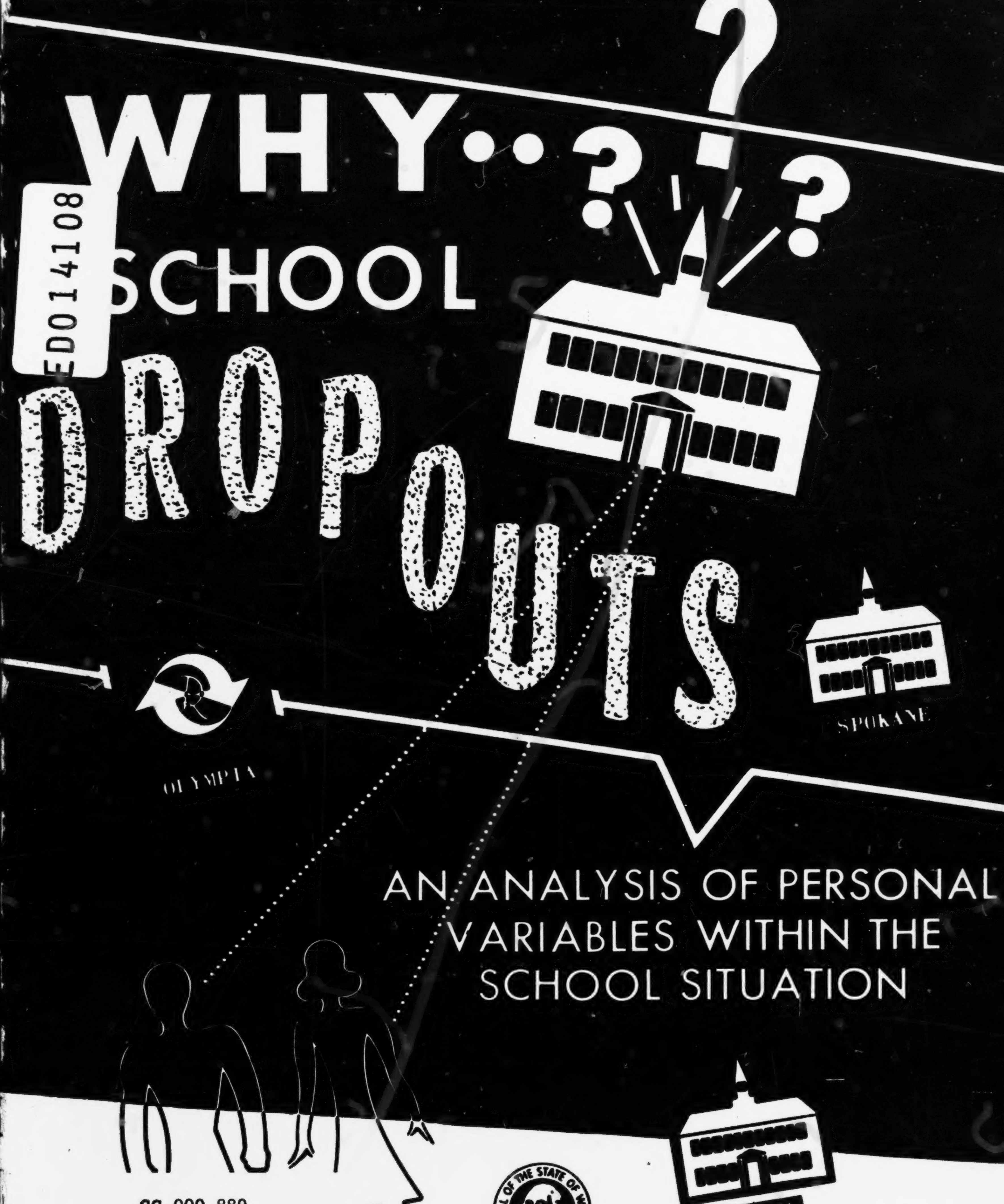
WHY..? SCHOOL DROPOUTS


SPOKANE
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AN ANALYSIS OF PERSONAL VARIABLES WITHIN THE SCHOOL SITUATION

CG 000 889

Louis Bruno
State Superintendent of Public Instruction
Olympia

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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DROPOUTS: AN ANALYSIS OF PERSONAL VARIABLES WITHIN THE SCHOOL SITUATION

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1963

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August 15, 1963

Mr. Louis Bruno
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Dear Mr. Bruno:

Dropouts from our public schools pose a critical social and economic problem at the local, state and national levels. The financial support provided by your office enabled Spokane Public Schools and Washington State University to jointly study this problem. An attempt was made to determine why persons drop out of school.

The findings suggest certain areas within the school program that might be modified in order to increase the holding power of our schools. Some program changes are being made as a result of the study and further changes are being contemplated by the district. Some of the findings also have implications for the training of teachers.

The cooperative research efforts initiated by your office, involving the institutions of higher learning and the public schools, will result in lasting improvements in learning opportunities for our children. Your approach resulted in additional support in terms of financial assistance and human resources from Washington State University and Spokane Public Schools.

We appreciated very much the assistance provided by your office.

Sincerely,

Zeno B Katterle

Zeno B. Katterle
Dean, College of Education

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encl.

ACKNOWLEDGMENT

The researchers express their appreciation to the Office of the State Superintendent of Public Instruction, the Spokane Public Schools, and Washington State University for providing the financial support, facilities, and staff time needed for conducting this study.

We are grateful to the Board of Directors, the administrative staff, and teachers of the Spokane Schools for their whole hearted cooperation throughout the study.

We give special thanks to the thousands of students who participated. We sincerely hope that our analyses have provided insights which will materially increase the educational opportunities for school children in the State of Washington.

PREFACE

Factors influencing pupils to drop out of school can be conceived as fitting into two categories:

(a) Those over which the school can exercise substantial amounts of direct control.

Examples: Achievement
Grading
Courses failed
Extracurricular activities
Attitude toward school

(b) Those over which the school has little or no control.

Examples: Parental attitudes
Family income
Parent-child relationships
Rural traditions
Vocational opportunity

This study purposely analyzed the factors over which the school has control on the assumption that a more accurate definition of the influence of those factors would better enable administrators and teachers to do the things they are best able to do to encourage more pupils to complete their schooling.

This limitation is in no way intended to imply that factors not controllable by schools are not equally important.

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CHAPTER I

BACKGROUND

American youth complete more years of schooling today than ever before. American youth also complete more schooling than do those of other nations. In view of these facts, the widespread attention to dropouts at all levels from local to national may seem incongruous and unnecessary.

The answer might be summed by the single word, needs: needs of youth, of society, of the nation. The school's responsibility to the individual includes a fundamental belief in individual worth, and preparation of the individual to attain a worthwhile place in society. Hamblin (1961, p. 7) indicated the importance of educational opportunity to a democratic society:

> The ultimate educational goal of a society that respects the rights of an individual is, regardless of its educational standards, or patterns, to enable each young person to go as far as his aptitudes will permit in fundamental skills and knowledge, and at the same time to motivate him to continue his own self-development to the full, for the benefit of himself and of society, present and future.

Mitchell (1960) as Secretary of Labor, indicated that the percentage of unemployment was almost twice as high for dropouts as for high school graduates, and again almost twice as high for high school graduates without college experience as for those who have some college education. Dillon (1949) suggested that the implications of a large number of young people leaving school every year discouraged and embittered was quite serious.

When a person leaves school with negative feelings, the consequences are not limited to personal problems, however. Society and the nation as a whole feel the impact. Although the dropout rate has been declining slightly each year, pupils who drop out of school pose an increasingly more serious social and economic problem. Technological advancement has changed the structure of the labor force. Mitchell (1960, pp. 8-11) emphasized the fact that new jobs are coming into existence and that the jobs for which there is a demand for workers are those that need greater education and training.

> As our technology advances, proportionately fewer workers will be needed to produce the goods we need. More workers will be needed to provide the increasing services required as our standard of living goes up. . . . The kinds of jobs industry will need workers for are also changing and the biggest increases will occur in occupations requiring the most education and training.

The National Education Association (1962, p. 2) reported that "technological changes are diminishing the number of jobs for the unskilled; it is estimated that only 5 per cent of the total labor force will be engaged in unskilled jobs during the next decade." It seems evident from these figures that the dropout group is seriously affected by the growing problem of unemployment, as economists and industrialists have pointed out.

The seriousness of this situation is underscored by statements of many authorities. Brumley (1961, pp. 1,4) made reference to the following: Secretary of Labor Goldberg, stating that the problem of dropouts is "the most dangerous social condition in America;" Conant calling it "social dynamite;" and Ribicoff calling it ". . . a terrible waste of our youth;" Brownell, Superintendent of the Detroit Public Schools, stating "if something isn't done, we will build a mass of unemployed youth who will be delinquents or worse;" and Ribicoff predicting that 2.5 million of the 10.8 million pupils in grades 9-12 will drop out of school. Thus, it is apparent that the economic impact of unemployable youth received considerable attention.

Of comparable importance, but receiving less attention is the problem of feelings that may be developed toward social institutions. Dillon (1949, p. 44) after studying data collected on eleven hundred dropouts, stated:

> These youth are on their way to becoming adult members of the community and their attitude toward school can have serious implications. Schools need vigorous support of the citizens of the community but this will not be forthcoming in full measure so long as a large number of young people are permitted to leave school every year discouraged and embittered. Their feelings may or may not be valid but it is imperative that young people have experiences in school that give them a favorable attitude toward the school as a constructive and important influence in the life of the community.

In a democracy, social institutions are dependent upon the favorable attitudes of the people. Without the support derived therefrom, it is questionable whether these institutions can exist.

Dropout rates (as a per cent of eighth grade enrollment in 1951-52) ranged from 6.9 per cent to 56.6 per cent in the fifty states, with a median of 34.4 per cent nationally. The state of Washington ranked twenty-second with a dropout of 32.2 per cent (NEA, 1959). It is figures such as these which excited so much interest nationally in the dropout. The most recent figures available demonstrate a slight decrease with national dropout rate to a median of 29.4 per cent, and a considerable decrease in the state of Washington, to 15.8 per cent, a sixth place ranking nationally (figures are based on high school graduation in 1962 as a percentage of eighth grade enrollment in 1957-58) (NEA, 1963b). As a percentage of fifth grade enrollment, the dropout rate remained fairly constant, at 36.4 per cent for 1954-55 fifth graders (NEA, 1963a).

If our society could absorb these dropouts and provide successful experiences for them, there would be little reason to consider them a problem. However, the converse seems to be true--to a sense of failure in school is added the failure to achieve lasting, satisfactory employment. From youths dropping out of school, unable to get jobs and unacceptable for enlistment in the armed forces, comes the threat of juvenile delinquency--and further loss to the nation. These young people are not likely to become responsible citizens of society. Conant (1961, p. 35) states "quite the contrary, as a frustrated individual he is likely to be antisocial and rebellious . . ." The fact of dependence on society rather than contribution to society is contrary to democratic ideals and thus, needs. With the current need for education, a dropout risks failure to satisfy personal, social, and economic needs.

Cantor (1953, p. 105) states, "The child needs to be informed about many skills and subjects. The dilemma arises because what he will need is not what he feels he now needs." Experience and research are providing answers to the question of what he will need. How to bring this feeling into closer conformity with reality seems to be a major issue--an issue that has not yet been satisfactorily resolved.

The purpose of this study was to examine school related factors for their relationship to dropout characteristics. Nationwide, a number of studies have been made in recent years in an attempt to describe the dropout and to provide means for holding him in school.

A synthesis of findings from 48 studies and reports relative to the dropout problem as it exists throughout the nation was presented in an NEA Research Memo of August, 1961. Included in the memo were: comparisons of numbers of children registered in school by age groups according to the census; retention rates of public and nonpublic schools, fifth grade through college entrance, 1932-1960; relationship of educational attainment to type of work in which a person will be employed and income; and why boys and girls leave school (NEA, 1961). The memo also listed factors which help to identify the potential dropout and local programs designed to improve school holding power.

A 1962 NEA report listed the following factors as being associated with influencing youths to drop out of school: lack of interest, feeling teachers are not interested, discouraged and failing in school, adverse school experience, poor study habits, low reading level, educational program does not meet individual needs, lack of participation in extracurricular activities, financial costs, low economic status, low education level of parents, parents place low value on schooling, lure of outside jobs and wages, community places low value on schooling, pregnancy, marriage.

These factors, however, are not unique to the dropout. They are problems that might be encountered in almost any pupil. Furthermore, few of them are primary factors, but are rather reasons pupils believe to be acceptable to authorities. For example--why should the lure of outside employment affect one person more than others? Is it lure of employment or dissatisfaction with school, using employment as an escape? The factors need to be more specifically defined and more accurately determined before one can say that they are influential in an individual's decision to leave school. After the factors are clearly defined, comparisons between dropouts and stayins are necessary in order to test their influence on a dropout decision.

Some research emphasizes the importance of identifying the combination or combinations of factors which seem to most strongly influence a student to discontinue his education:

> Livingston found that a combination of factors is a better indicator of potential withdrawal from school than any single factor. His study determined that the highest correlation (.70) was obtained with a combination of factors which comprised low participation in formal and informal school activities, number of grades detained, and status of persons with whom the pupil lived. Livingston's conclusion suggests that the greater the number of factors working to the disadvantage of the pupil, the greater the chance of the pupil's dropping out of school. (NEA, 1961, pp. 8-9.)

Bowman and Matthews (1960) used data collected over an eight year period as part of the Quincy Youth Development Project in an attempt to answer questions concerning dropouts. The variables considered in their study were intelligence, social status, personal and social adjustment, school adjustment, marital adjustment, and achievement values. From their analysis, Bowman and Matthews concluded that dropouts generally have lower intellectual ability than stayins, generally come from families of lower socioeconomic status than stayins, and they are generally inferior to stayins who are matched on age, sex, intelligence, and social status in terms of adjustment to school, work, marriage, and society in general.

The Quincy study, however, measured differences after the student had made his decision to leave school, and followed his progress from that point.

An abundance of research indicates that attitudes greatly influence learning and the long-range interest in continued learning, and several studies suggest that pupil attitudes and feelings are interwoven with influences toward leaving achool. However, little empirical evidence is available to indicate the extent to which particular factors of school experience affect the development of attitudes toward specific aspects of learning or toward education as a whole. No specific study was found which attempts to establish the importance of attitude toward school related concepts as they dynamically interact with other factors associated with dropping out of school.

Dillon (1949) emphasized the idea that potential dropouts can be identified by certain indicative attitudes and behavior patterns early in their school experience. He further stated that if schools are to motivate potential dropouts to remain in school, these attitudes and behavior patterns must receive early attention.

To the degree that attitudes are important determinants of behavior, attitude measurement becomes an important adjunct to cognitive appraisal. Identification of attitude factors and measurement of their effects will help school personnel to provide pupils with experiences which contribute to favorable attitudes. Thus, further research is necessary to differentiate between dropouts and stayins in attitudinal as well as intellectual areas. The research must isolate differences which exist before the decision to drop out is reached, so that the results can be utilized in preventive programs.

Rationale

Recognizing the need to meet local dropout problems, but unable to find research that satisfied the local requirements, this study was initiated as an attempt to describe the nature of pupils in the Spokane Public Schools and, from these data, to isolate factors which are related to early school leaving.

Through analysis of data on the total population of the grades studied, a characterization of the total group was developed with which dropouts could then be compared. Since it is known that many pupils who stay in school have characteristics similar to those who drop out, information is needed about which factors have most and least influence on pupils' decisions to drop out of school and which combination or combinations are most critical.

The twelfth grade portion of this study provides information of immediate use concerning characteristics associated with the decision to attend college and which differentiate between students who plan to attend college and those who do not.

The eighth grade provides a basis for differentiating between stayins and the earliest large group of dropouts, and presents information concerning characteristics of dropouts. In addition, the foundation for a longitudinal study of dropouts from this population is established.

Inclusion in the study of the fourth grade makes possible a long range study including persistence of characteristics. It also provides for some checks on the original findings and serves as a basis for experimental programs to increase the holding power of the schools.

Statement of the Problem

Basic hypotheses for the study were:

1. Some factors will have more influence than others on the decision to drop out of school.
2. Some combinations of factors will be more critical than any single factor.
3. Some combinations of factors will be more critical than other combinations of factors.
4. Certain dropout characteristics will be evident in pupils as early as the fourth grade.

The design of the study placed special emphasis on school related factors, since these are the factors which can be controlled in the school setting. However, minimal home information was necessary for purposes of control in order to make more accurate comparisons among school related factors.

It appeared desirable to use data already existing in school records wherever these data could be incorporated into the design of the study. This plan eliminated considerable duplicating of testing. A strong emphasis was placed on the relationship of attitudes to factors of school experience, an area for which little empirical evidence is available.

Special emphasis was placed on implications for the school in the area of (1) curriculum, (2) guidance, (3) special and remedial instruction, (4) school-community relations, (5) administration, and (6) extracurricular activities.

For purposes of this study, a dropout is defined as a person who leaves school with the present intention of discontinuing formal education. Whether or not he returns to school at a later date is beyond the scope of this study, since it is assumed that experiences which occurred between the time he left school and the time at which he returned are in part, at least, responsible for the return to school. Experiences which are related to the dropout factor are those which occur prior to the decision to leave school.

A stayin is defined, for purposes of the eighth and fourth grade portions of the study, as a person who continues in school to high school graduation.

Since all pupils in the twelfth grade portion of the study were graduating seniors, none of these would be considered dropouts as the term is commonly used; however, education beyond the high school level has become increasingly important, and a person who has the capabilities for college study, but terminates his education with graduation from high school, is also a dropout. Therefore, emphasis at the twelfth grade was placed on whether or not a student planned to continue his education.

The distinction between those leaving before high school graduation and those graduating has been maintained by using the terms dropout and stayin in referring to the eighth and fourth grade populations, and college and non-college for the twelfth grade populations.

CHAPTER II

RESEARCH DESIGN

General Procedures

During the fall of 1961, meetings were held with various administrative members of the Spokane School District No. 81, and interested educators from the College of Education, Washington State University, to consider the extent and the nature of the dropout problem in the Spokane Schools.

Following appropriate action by the Spokane Public Schools, the State Superintendent of Public Instruction, and Washington State University, the study was officially approved on January 31, 1962. Funds and resources for the study were provided jointly by the three participating agencies.

In addition to studying the dropout situation in Washington State, the study was designed to provide maximum information for the Spokane Public Schools, and to provide a basis for longitudinal follow-up. The following three part division seemed to best satisfy these requirements:

> An analysis of personal variables within the school situation in the twelfth grade.
>
> An analysis of factors in the eighth grade associated with dropouts.
>
> An analysis of characteristics of fourth grade pupils in terms of dropout assoicated factors.

Definition of the Population

Findings in studies on dropouts have been closely associated with the population on which the particular study was based. For this reason, a detailed description of the population with which this study was concerned is of importance to application of findings.

Spokane was selected as being a representative community in Eastern Washington containing a student population large enough to justify the scope of the study. Spokane is the industrial and commercial center of an area embracing agricultural, lumbering, mining and manufacturing industries, and military installations. The urban population is slightly less than 200,000.

The study population included all students in the Spokane Public Schools who entered grades twelve, eight, and four in September, 1961, with the exception of students in special classes for the physically handicapped and mentally retarded. The resulting population was approximately 7,000 students.

Twelfth grade students included in the study totaled 1,539. The four high schools from which they were drawn represented both the three year and the four year secondary school curriculums.

Eighth grade students numbered 2,386. They came from six junior high schools and thirteen elementary schools. Five junior high schools operated under a three-year curriculum while the sixth followed a two-year curricular program. The thirteen elementary schools were organized on an eight-year basis. Eighth grade totals from the various schools ranged in numbers from 24 to 470.

The 49 Spokane elementary schools vary in organizational structure. Depending on the school, a pupil will attend elementary school for six, seven, or eight years, and therefore, the transition to junior or senior high school may occur at different times.

Data Collection

The principal investigator and three assistants from Washington

State University worked with Spokane School District personnel, with coordination by the Spokane District Research Director. Meetings provided opportunities for examination of school recording systems and facilitated integration of existing data and additional data collected for purposes of this study. A further result of these meetings was that instruments were developed to obtain data which contributed to the understanding of pupils who dropped from school.

Special forms were developed for the consolidation of data from various sources. These forms (Appendix A) provided for ready transfer of information to data processing cards.

Through the Spokane District Research Office a testing schedule was established for administration of inventories to pupils of the twelfth and eighth grades. Detailed instructions were provided to school district personnel, who administered the inventories to the twelfth grade during March, 1962, and to the eighth grade early in May, 1962.

School records (including cumulative folders, permanent record cards, and grade sheets) for twelfth, eighth, and fourth grade pupils supplied a major portion of the total data. A data blank was developed for each grade level in order to provide for efficient and concise collection of these data, which included standardized test results and certain items of student information (Appendix A, pp. 74,82, 89). Transfer of the data occurred during April and May, 1962, for the twelfth and eighth grades, and during August, 1962, for the fourth grade. Clerks employed by the school district for this purpose were given specific instructions in an attempt to provide uniformity and standardization of the interpretation.

Additional data were secured from 200 selected twelfth grade students through interviewing. A group of NDEA Guidance Institute counselors from

Washington State University were trained in specific procedures, and interviewed the selected students during May, 1962. When response results had been obtained, a classification system was developed and the responses were coded for transfer to data processing cards.

Confidentiality of data was maintained by assigning a code number to each pupil and recording data by code number rather than by name. Code lists were retained in the Spokane School District offices so that future dropouts could be included in the study, and findings applied in the school district program.

Variables and Instruments

The following discussion defines variables and the instruments used to measure them as outlined in the chart on page 14.

Intelligence and Aptitude

The "School and College Ability Test" (SCAT), was administered to the twelfth grade population during their eleventh grade, and to the eighth grade population during their seventh grade. This test yields three scores: verbal, quantitative, and total. The test is weighted slightly in favor of the verbal parts. Five scores were obtained from the "Differential Aptitude Tests" (DAT) which were administered when the students were in the ninth grade. These scores were available for both the twelfth and eighth grade populations. Tests used were Verbal Reasoning, Numerical Ability, Abstract Reasoning, Space Relations, and Mechanical Reasoning. The "Lorge-Thorndike Intelligence Test" (L-T) was administered to the fourth grade population at the beginning of their fifth year. This test yields two scores: verbal and non-verbal.

These test scores, all available from school records, were used as

VARIABLES AND INSTRUMENTS BY GRADE LEVEL

Variables	Instruments Grade Twelve	 Grade Eight	 Grade Four
Intelligence	SCAT	SCAT	Lorge-Thorndike
Aptitude	DAT	DAT	. .
Achievement	. .	SAT, MAT	SAT, MAT
School Adjustment			
Grades	School Records	School Records	School Records
Years Retardation	School Records	School Records	School Records
Attendance	School Records	School Records	School Records
Health	School Records	School Records	School Records
Self-estimate of School Adjustment	. .	Questionnaire	. .
School Related Experiences			
Future Education Plans	Questionnaire	. .	. .
Work Experience	Questionnaire	Questionnaire	. .
Car Ownership	Questionnaire	Questionnaire	. .
Home	Questionnaire	Questionnaire	School Records
Schools Attended	. .	. .	School Records
Number of Residences	. .	. .	School Records
Socioeconomic Status	Parent's Occupation	Parent's Occupation	Parent's Occupation
Extracurricular Participation	Activities Inventory	Activities Inventory	. .
Attitudes	Attitude Scale	Attitude Scale	. .
Personal and Social Adjustment	Mooney Problem Check List	Mooney Problem Check List	School Records
Guidance and Counseling Provided	Interview	. .	. .

measures of academic ability.

Achievement

The "Metropolitan Achievement Test" (MAT) and the "Stanford Achievement Test" (SAT) were used as measures of school achievement for the eighth and fourth grade population. For the eighth grade population, the SAT test was administered when these pupils were in the fourth grade and the MAT when they were in the eighth grade. The SAT and MAT test results used for the fourth grade were based on tests administered in the third and fourth grades respectively. Scores included measures of reading, language, arithmetic, social studies, and science achievement. These scores were all obtained from school records.

School Adjustment

The variables included in this group were grades, years retarded in school, attendance, and health. All data for these variables were obtained from student records.

Methods of treating data on grades varied by grade level. At the twelfth grade level, subject matter designations corresponded with those used in the Washington Pre-College Testing program. Total grade point average (GPA) was available from student records, and area GPA's were calculated from individual course grades.

Grades for the eighth grade population included math, English, social studies, and science, treated individually and together as "academic GPA." Other courses were grouped to yield a "non-academic GPA."

Since letter grades were not assigned at the elementary level, the treatment of reports was different. Marks on more than forty specific characteristics were combined into ten major areas for computational purposes.

These will be explained further in chapter five.

Years retardation and attendance were obtained from school records and were used to indicate other aspects of school adjustment. Health conditions were used to indicate possible physical explanations for retardation and attendance problems.

The eighth grade pupils also reported a self-estimate of school adjustment as part of their questionnaire (Appendix A, p.83).

School Related Experiences

Factors believed to be relevant to the purpose of this study, although not part of the conventional school curriculum, were also included. The desired information for the fourth grade population was obtained from school records. This included home situation as shown by number of residences listed, and number of schools attended, parents' marital status, father's occupation, and number of siblings. Much of the comparable information desired for the twelfth and eighth grade population was not normally available or could possibly have been out of date in school records. To insure standardization of data, these factors were included in a questionnaire which was administered to the pupils (Appendix A, pp. 75, 84).

This questionnaire was constructed after items used in similar studies had been analyzed. Questions were prepared and subjected to the criticism of qualified staff members of the Washington State University College of Education, who were instructed to judge the questions for their pertinence and relevance. Those questions considered most productive in terms of the variables to be analyzed, and least complex in terms of students' interpretation, were adopted for the questionnaire, which was then reviewed by the guidance specialist and the research director of the school district. Minor changes were made to meet their specifications, and the questions were restated in a form which permitted efficient coding for IBM computation and statistical treatment. The instruments were printed at Washington State University.

The twelfth grade questionnaire was composed of 19 items; the eighth grade, of 25 items. Information derived from the questionnaire included work experience and car ownership, as well as data similar to that obtained for the fourth grade population (Appendix A, pp. 75, 83, 84).

Socioeconomic Status

Parents' occupations were scaled by use of the Duncan Socioeconomic Index (Reiss, 1961). This index provides a numerical value, from 0 to 100, representing the socioeconomic level associated with a particular occupation.

Extracurricular Participation

Extracurricular participation was measured by activities inventories developed for the twelfth and eighth grade sections of the study. These inventories were constructed to give not only an indication of whether or not the student participated in an activity but also to provide some measure of the degree of participation. An activity, for purposes of this study, was considered to be an event which provided some element of identification or recognition within the school, but was not included in the regular academic schedule. These activities were grouped under the areas of fine arts, high school clubs, intramural sports, interschool sports, student government, class and student body committees and other. Under each area, consideration was given to those activities which were provided for the students by most of the schools included in this study. The student was asked to indicate degree of participation by responding to statements about the activity. These statements were arranged in hierarchical order ranging from no participation to the highest degree of participation possible in the school setting. The instruments were reviewed by staff members at Washington State University and by the Director of Special Services and the Director of Physical Education in the school district. As a result of consultation with each of these persons, the instruments were revised, and then printed at Washington State University as parts of Inventory 1 SDO and Inventory 1 SDO 8 (Appendix A, pp. 76-78, 85).

Attitudes

An attitude scale utilizing the semantic differential technique developed by Osgood was administered to the twelfth and eighth grade populations.

Osgood, Suci, and Tannenbaum (1957) developed a new approach and rationale for attitude measurement. Their findings compared favorably with results from Thurstone and Guttman techniques.

The concepts included in the attitude scale used in this study have been purposely limited to those institutions, activities, and associations which are common to or required of the total population under consideration. They are school related concepts with which all students are familiar. These concepts include tests, mathematics, homework, reading, English, physical education, social studies, grades, writing, classmates, science, teachers, and school.

The scale selection criteria suggested by Osgood are factorial composition, relevance, and semantic stability. A number of potentially usable scales have been identified by Osgood as a result of the factor analysis. He indicates also that scales of unknown factorial composition are often highly relevant to a particular problem, and may be used.

The adjective scales selected for this study are taken from Osgood's thesaurus analysis and research reported by him with relation to attitude measurement. Consistent with the criteria suggested by Osgood, adjectives which were identified by factor analysis as having high evaluative loadings were considered. Those judged relevant to the concepts being considered were included in the scale.

The form of the scale used in this study follows that suggested by Osgood. The instrument consists of 13 concepts judged against 13 evaluative scales (Appendix A, pp. 79-81, 86-88).

Two weeks after the initial testing the attitude scale was readministered to two classes, seventy-nine students in one school. The retest was given at the same hour of the day as the first testing. Test-retest reliability coefficients for the 13 concepts and the total score were: Tests .80, Mathematics .79, Homework .79, Reading .73, English .76, Physical Education .70, Social Studies .81, Grades .76, Writing .71, Classmates .84, Science .83, Teachers .79, School .70, and Total .89. Osgood reported test-retest coefficients ranging from .83 to .91 on three selected concepts.

Personal and Social Adjustment

Permission was obtained from the Psychological Corporation to use three sections of the Mooney Problem Check List Form H, high school, and Form J, junior high school. The areas selected were: adjustment to school work, the future--vocational and educational, and curriculum and teaching procedure. The check list was used to identify student problems and clusters of problems related to school, future, and associations with others.

The check list was administered to the twelfth and eighth grade populations. At the fourth grade level, teacher's comments recorded in the "personal growth" section of the progress report were used to measure personal and social adjustment.

Guidance and Counseling Provided

Certain types of information desired from twelfth grade students could not be appropriately covered by questionnaire. An interview was used to elicit such information. Areas covered included most valuable and least valuable elements of the high school experience, whether or not the student had established definite vocational goals, how much the students knew about the guidance program, what kinds of problems the students had taken to the school counselors, what kinds of leisure time activities the students participated in, and the nature of their peer relationships.

The prepared draft of the interview schedule was reviewed by a group of 33 professional counselors who analyzed it from the standpoint of their personal association with high school age students. The schedule was revised and administered to several high school seniors and college freshmen in an effort to eliminate ambiguities and communication difficulties. Revisions were made and the instrument was tested. Responses to individual items and time taken for the total interview were recorded. The time required for the interview was estimated to be about 15 minutes. The items were again revised and the interview form was printed.

In order to insure as much consistency as possible, practice interviews were held, and an instruction sheet containing procedures and a brief review of the purpose of the interview was prepared for interviewers.

Statistical Treatment of the Data

Data from the several instruments were transferred to IBM data processing cards and processed by the 709 digital computer at Washington State University.

Intercorrelations between the various measures for each grade were computed. The twelfth grade matrix contained 51 variables; the matrix for the eighth grade included 54 variables; and 41 variables made up the fourth grade matrix (Appendix B, pp. 91-93).

The standard t test was used to test the difference between means of sub-groups in the twelfth grade. Further application of the t test of significance was made to test the difference between eighth grade dropouts and an equal number of stayins matched on the basis of IQ and socioeconomic status.

The F test was used to test the difference between sub-groups in the twelfth grade for selected variables.

Differences between mean scores of eighth grade dropouts and total stayins were tested by use of the critical ratio (CR).

Certain variables were reported in dichotomous form. Differences between these variables for sub-groups in the twelfth grade and for eighth grade dropouts and stayins were tested by use of the chi-square technique.

Regression coefficients, partial correlations, multiple correlation coefficients, and standard errors of estimates from regression equations were calculated for twelfth grade sub-groups in determining the effectiveness of certain combinations of factors for predicting GPA.

The discriminant function was employed for the eighth grade population to determine combinations of variables which discriminate between dropouts and stayins.

Biserial correlation coefficients were computed for certain variables at the fourth grade level.

CHAPTER III

TWELFTH GRADE ANALYSIS

Population

The twelfth grade population included all 1961-62 senior students from the public high schools of School District 81, Spokane, Washington. Data were obtained on 1,539 students. Transfer students without complete records and students absent at the time of testing were not included in the study.

In order to compare students who drop out with those who continue their education, approximately two hundred students were selected representing the following four sub-groups:

1. High attitudes--planning to go to college
2. Low attitudes--planning to go to college
3. High attitudes--not planning to go to college
4. Low attitudes--not planning to go to college

Variables and Sources of Data

A major portion of the data was obtained from existing school records. Wherever possible, results from standardized tests administered as a part of the regular school program were used. Instruments were utilized to obtain necessary background information, measures of attitudes toward school related concepts, degree of participation in school activities, and number of school related problems (Appendix A, pp. 74-81).

Objectives

Previous studies indicate that attitude toward school is, in significant measure, the result of certain factors of school experience that can be modified or controlled by teachers and other school personnel.

The objectives of the study at the twelfth grade level were:

1. To determine which factors have most and least influence on the student's decision about whether or not to go to college.
2. To identify factors of school experience associated with favorable and unfavorable attitudes toward school.
3. To determine the relationship between these various factors of school experience and attitudes.
4. To determine the relationship between the student's attitude toward school and his decision about post high school education.

Results

Chi-square, critical ratio and F tests were used as appropriate to test significance of differences between groups. The following conclusions appear warranted.

College Plans

Sixty-four per cent of the students planned to attend college. There was a significant difference between the sexes. More boys than would be expected planned to enter college. A larger number of the boys were undecided than would be expected, and a larger number of the girls did not plan to enter college than would be expected (Table 8, p. 97). It appears that the greatest deviation from the expected frequencies are in the groups not planning to enter college (Table 9, p. 97).

Intellectual Ability

Students going to college performed better on measures of ability in the verbal areas than did those not going to college. Students with low attitude measures who were going to college also measured higher in non-verbal areas than did students with low attitude measures who were not going to college. There were no significant differences between students with high attitude measures who were going to college and those with low attitudes going to college, with respect to measured ability. Students with high attitudes not going to college had higher measures of ability in both verbal and non-verbal areas than did students with low attitude measures not going to college (Table 54, p. 120).

Grade Point Average

Students who planned to attend college obtained higher grade point averages in all areas except foreign languages than did students who were not planning to enter college. The areas were English, mathematics, foreign language, social studies, natural science, and "other" electives. The first five areas are referred to as academic areas. Students with favorable attitudes obtained higher grade point averages than those with unfavorable attitudes (Table 55, p. 121).

Students Working

There were no significant differences between girls going or not going to college on whether or not they had part-time work (Table 13, p. 99). Proportionately fewer boys who were going to college worked than those who were undecided about college or were not planning on going to college (Tables 14, 15, p. 100).

Car Ownership

Forty-five per cent of the twelfth grade boys and six per cent of the twelfth grade girls owned cars. A greater proportion of the boys not going to college and undecided about whether to enter college owned cars than did boys who planned to attend college (Table 10, p. 98). No significant differences existed between girls going, not going, or undecided with respect to college and whether or not they owned a car (Table 12, p. 99). No differences were found between the attitude groups with respect to car ownership (Tables 36, 37, p. 110). Car ownership correlated negatively to a significant degree with all areas of measured ability except DAT space relations and DAT mechanical ability. Car ownership correlated negatively to a significant degree with GPA in all areas (Table 1, p.91).

Father's Occupation

Students who planned to enter college reported occupations for their fathers which yielded higher socioeconomic index values than did students not going to college or students who were undecided about whether or not to enter college (Tables 16, 18, pp. 101,102). Father's occupation correlated positively at a significant level with all measures of ability, and with grade point average in all areas (Table 1, p. 91).

Mother's Work

Forty-six per cent of the students reported that their mothers worked outside the home. Whether or not a mother worked did not appear to be associated with attitude toward school or decision about going to college (Tables 20, 21, p. 103).

Number of Children in the Family

Children of larger families appeared to perform less well on measures of ability in the verbal areas and obtained lower grades in all areas except mathematics and foreign language (Table 1, p. 91). This relationship, however, was slight.

Parents Living

Ninety per cent of the students reported that both parents were living. There were no significant differences between students going to college, not going to college, and undecided with respect to the number who indicated that both parents were living (Tables 22, 23, p. 104).

Parents Separated

Fifteen per cent of the students reported that their parents were separated. There were no significant differences between students going to college, not going to college, and undecided with respect to the number whose parents were separated (Tables 24, 25, p. 105).

Repeated Grades

A greater proportion of the students not going to college and undecided had repeated grades than had those going to college (Tables 26, 27, 28, 29, pp. 106, 107).

Failed Courses

Forty-two per cent of the boys had failed at least one high school course while only thirteen per cent of the girls had failed. A greater proportion of students not going to college and undecided had failed courses than had those going to college (Tables 30, 31, 32, 33, pp. 108, 109). Students who measured low in attitude failed proportionately more courses than had those with high attitude measures (Tables 40, 41, 42, 43, pp. 113, 114).

Both retardation and failure were negatively correlated with all measures of ability, grade point averages in all areas, participation in clubs, student government, and committee activities and attitude measures except attitude toward physical education (Table 1, p. 91).

Extracurricular Activities

Students with high measures of attitude participated more in high school clubs, student government, and committee activities than did students with low attitude scores (Tables 57, 58, p. 122). These differences remained significant even after the effect of ability as measured by SCAT total was partialed out (Table 61, p. 124). Participation in these activities correlated positively with ability, academic success, and attitude (Table 1, p. 91).

Problems Checked

Students with low attitude measures who were not going to college checked more problems in the "adjustment to school work" area than did those with high measures of attitude (Tables 59, 60, p. 123). The number of problems checked was negatively correlated with all measures of ability, grade point average in all areas, and with almost all measures of attitude (Table 1, p. 91).

Older Siblings

There were no differences in the number of students from the various attitude groups who indicated that they had older siblings (Table 44, p. 115). However, those students who had older brothers or sisters were asked to indicate whether or not these brothers or sisters had graduated from high school. The number whose older siblings had graduated is given in Table 45, page 116. It appears from inspection of Tables 45 and 46, page 116 that fewer students who planned to enter college had older siblings who dropped out of high school before graduation than did students not going to college. The students interviewed were asked if they had ever seriously considered quitting school. The number who reported that they had is given in Table 47, page 117. A greater proportion of the students in the low attitude not going group had seriously considered quitting school than from any of the other attitude groups. The low attitude not going group made the major contribution to the chi-square value (Table 48, p. 117).

Vocational Planning

Students with high attitude scores who were planning to enter college anticipated occupations yielding higher socioeconomic ratings and appeared to have done more vocational planning than the other groups (Tables 49, 50, 51, 52, pp. 118, 119).

Summary

Compared with students who did not plan to enter college, those who were going performed better on tests of ability in verbal areas; obtained higher grade point averages in all high school subject areas; less frequently owned a car; came from homes of higher social status; repeated fewer grades; failed courses less frequently; participated in more high school clubs, student government, and school committee activities; and had done more vocational planning. The factors of school experience which appeared most closely related to the students' decisions about entering college were academic success, participation in extracurricular activities, vocational planning, and attitude toward school.

Students who were identified as having highly favorable attitudes toward school, when compared with those with low attitude measures, performed better on ability tests; received higher grade point averages in all areas; repeated fewer grades; failed courses less frequently; participated more in high school clubs, student government, and committee activities; indicated fewer problems in adjustment to school work; less frequently reported having older brothers or sisters who had dropped out of school; and had done more vocational planning. The school related variables which appeared to be most closely associated with attitude toward school were academic success, participation in extracurricular activities, and vocational planning.

Although the cause and effect relationship was not determined, the findings of this research would suggest that academic success and failure have a significant relationship with both the decision about college and attitude toward school. The data indicate that forty-two per cent of the boys and thirteen per cent of the girls had failed high school courses. The percentage of failure and the discrepancy between boys and girls should be studied in light of the objectives of the grading system and the goals of education.

The relationship between participation in school clubs and both decision about college and attitude toward school suggest further utilization of certain types of activities.

Attitude toward school appeared related to the establishment of definite goals. Students with favorable attitudes planned more for their future than students with less favorable attitudes. It was evident that a large number of capable students who have positive attitudes toward school do not plan to attend college.

CHAPTER IV

RESULTS AND ANALYSIS OF EIGHTH GRADE FACTORS

Purpose

The purpose of studying the eighth grade was to investigate and analyze factors associated with dropouts. The following questions were basic. Are students who leave school between eighth and ninth grade different from those who continue? If they differ, are factors which differentiate between the two groups of such a nature that potential dropouts can be identified in the eighth grade?

Specifically, this study was designed to test the following hypotheses:

1. Dropouts will score lower on measures of achievement and scholastic aptitude than stayins.
2. Dropouts will be lower than stayins in terms of school adjustment.
3. Dropouts will estimate their scholastic achievement lower than stayins.
4. Dropouts will come from families having lower socioeconomic status, parents with less education, and more siblings than stayins.
5. Dropouts will participate less frequently in extracurricular activities than stayins.
6. Dropouts will have lower attitudes toward school and school

related concepts than stayins.

7. Dropouts will have more personal problems than stayins.
8. Certain combinations of variables can be used in identifying potential dropouts and stayins.

Population

All students enrolled in the eighth grade during 1961-62 with the exceptions mentioned earlier (Chapter II), were included in the study. Any eighth grade student who dropped out of school before May, 1962, was not included. The resulting eighth grade population totaled 2,386 students.

Dropout

A dropout has been defined in this study as a pupil from the 1961-62 eighth grade class who either failed to register for ninth grade in September, 1962, or who left the ninth grade before February 1,1963, and did not transfer to another educational institution. The Spokane Public School Research Office identified all such dropouts, making certain that transfer students were not included. The names so identified were coded and code numbers were subsequently forwarded to Washington State University for inclusion in the study. Total dropouts numbered 124. Due to missing data on certain variables this number was subsequently reduced to 93 for certain analyses. Missing data were mainly attributable to incomplete records of new students transferring into the district or absences at the time of data collection.

Instruments

The instruments have been discussed elsewhere; therefore, this section will involve only those items that are unique to the eighth grade.

Data Blank

Birth date, sex, health problems, attendance, grades, SAT scores, MAT scores, SCAT scores, and DAT scores were recorded on the data blank (p. 82).

An academic and non-academic grade point average were computed. Academic courses included English, mathematics, social studies, and science. Non-academic courses included health, music, art, industrial arts, home economics, and physical education.

Questionnaire

The questionnaire (p. 83) contained 25 items. Seventeen of these items were common to both the twelfth and eighth grade instruments. Six questions were asked to gain insight into the student's self appraisal. Questions (a) and (b) obtained information about how students liked eighth grade compared to other grades. Item (c) obtained the student's estimate of his academic grades. Questions (d), (e), and (f) were used to obtain information about the student's satisfaction at receiving various grade averages during the ninth grade. Items (g) and (h) asked the student to indicate what school subjects were liked best and least. Grades skipped were obtained from question (j).

Activities Inventory

Degree and kind of participation in extracurricular activities were obtained from an activities inventory. These activities were grouped as follows: (1) arts and science, including art, music, dramatics, and science; (2) sports, including flag football, basketball, track, and baseball or softball; and (3) clubs and service, including student government, clubs, pep activities, social activities, and school service (traffic squad, fire squad, office, library).

Results

Comparisons were made between the dropouts and total stayins on 39 variables. Incomplete data on some variables resulted in the N for the dropout group varying from 49 to 93, and for the total stayin group varying from 1,489 to 2,294 depending on the particular variables being analyzed. Comparisons on 56 variables were made between dropouts and an equal number of stayins matched on the basis of sex, intelligence and socioeconomic status. In cases where more than one student of the stayin group matched a student in the dropout group, one stayin student was randomly selected. Intelligence was determined by SCAT total score. For students not having SCAT measures, DAT (VR + NA) scores were substituted. The DAT technical manual reports evidence supporting the use of (VR + NA) as a measure of intelligence. Using the Duncan index, socioeconomic status was determined by assigning scale values to occupations.

Further comparisons were made between dropouts and a randomly selected group of stayins to determine which combinations of factors were most critical in predicting potential dropouts.

Statistical tests of significance included the critical ratio (CR) test, the t test of means, and the chi-square test of independence. Combinations of variables were analyzed using the discriminant function following suggestions of Kendall (1957) and Rao (1952).

Standardized Achievement Tests

The Stanford Achievement Test (SAT) was administered to these students during the fourth grade. Mean score differences between dropouts and total stayins did not appear to be significant in any of the areas measured by the

SAT (Table 62, p. 125). Similarly, no differences were found between dropouts and matched stayins on SAT measures (Table 74, p. 132).

Results of the Metropolitan Achievement Test (MAT), given during the eighth grade, showed a significant difference between dropouts and total stayins (Table 63, p. 125). Scores on achievement measures of reading comprehension, language study skills, arithmetic problem solving, social science information, and science were all lower for dropouts than for total stayins. Although the greatest difference between dropouts and total stayins occurred in language study skills, a sizeable difference also occurred in arithmetic achievement. Dropouts and matched stayins did not differ significantly on any MAT measures (Table 75, p. 132).

Intellectual Ability

Dropouts were lower in intellectual ability than total stayins as measured by SCAT total results. Table 64, p. 126, shows that the mean score for dropouts was 8.17 points below the mean score for stayins.

Scholastic Achievement

Although the differences were not pronounced, dropouts achieved significantly lower grades than total stayins in eighth grade academic subjects (Table 65, p. 126). Academic subjects included English, arithmetic, social studies, and science. Similarly, dropouts earned significantly lower grades than matched stayins in academic subjects (Table 76, p. 133), indicating that when the intellectual ability is controlled, dropouts earn lower grades than stayins in academic subjects.

Attendance

Comparison of school attendance revealed that dropouts missed more school than total stayins (Table 66, p. 127) or matched stayins (Table 77,

p. 133). The average number of days absent from school for dropouts was twelve days out of 180; total stayins missed approximately six days. A negative relationship existed between absence and all other measures with the exception of work out of school and personal problems (Table 2, p. 92). Greater absence from school was associated with lower achievement, lower self-estimate of academic grades, fewer activities participated in, lower attitudes toward school, lower socioeconomic level of the home, more hours of work per week, a greater number of schools attended, and more personal problems.

Self-Estimate of Grades

Responding to a question concerning self-estimate of grades, dropouts indicated that their grades would be significantly lower than total stayins' (Table 67, p. 127). A high correlation existed between students' self-estimate of academic success and their actual academic grade averages (Table 2, p. 92). Although there was a significant difference between dropouts and total stayins on estimation of grades, dropouts appeared to appraise their own grade earning power realistically. Comparison between dropouts and matched stayins on self-estimate of earning grades showed no significant difference (Table 78, p. 134).

Work Hours Outside of School

Dropouts were employed more hours per week than stayins (Table 68, p. 128; Table 81, p. 135). Interpretation of the data indicated that stayins, both total and matched, averaged less than two hours work per week, whereas dropouts averaged close to four hours of work per week. This difference, although significant in comparison with both stayin groups, was slightly more pronounced for dropouts and the matched stayin group.

Father's Occupation

The average occupational level of dropouts' fathers was significantly lower than that for fathers of total stayins (Table 69, p. 128). Father's occupation was scaled using the Duncan Socioeconomic Index. A positive correlation occurred between father's occupation and measures of achievement, ability, academic grades, amount of education of the father, and all attitudes except attitude toward physical education (Table 2, p. 92).

Educational Attainment of the Parents

Fathers of dropouts had fewer years of education than fathers of total stayins. Table 70, p. 129, indicates that fathers of students who remained in school were more likely to have had some college education than were the fathers of students who dropped out. There was no significant difference between dropouts and matched stayins regarding the amount of education attained by their fathers and mothers (Table 83, p. 136).

Extracurricular Activities

Dropouts participated less than total stayins in the following extracurricular activities: dramatics, music, art, science, clubs, student government, and school service. There was no difference between the groups in amount of time spent on sports activities (Table 71, p. 129). Similarly, dropouts participated less in extracurricular activities than matched stayins (Table 86, p. 138). Dropouts and total stayins did not differ in sports participation; dropouts, when compared with stayins matched on sex, intelligence, and socioeconomic status, were significantly different in all areas of extracurricular activity. Amount of participation in these activities correlated positively with measures of achievement, ability, academic grades, and attitudes (Table 2, p. 92).

Attitudes

Results of the attitude measures indicated that dropouts scored significantly lower than total stayins on attitude toward tests, mathematics, homework, English, social studies, grades, classmates, science, teachers, school, and total. There was no difference between these groups on attitude toward reading, writing, and physical education (Table 72, p. 130).

In comparing dropouts with matched stayins, no differences in attitude were found with the single exception of attitude toward school (Table 87, p. 138). On attitude toward school, dropouts scored significantly lower than matched stayins. Other than physical education, all attitude measures correlated positively with measures of achievement, ability, and academic grades (Table 2, p. 92).

Personal Problems Checked

Dropouts checked more total problems, more problems related to school, and more problems related to money, work, and future than total stayins. There was no significant difference between dropouts and total stayins regarding problems with people in general (Table 73, p. 131). The strongest contribution to total problems was made by problems related to school. Comparison of mean number of problems checked between dropouts and matched stayins indicated that no significant differences existed (Table 88, p. 139). Personal problems were positively correlated with number of days absent, work outside of school, and number of schools attended (Table 2, p. 92).

Further Comparisons Between Dropouts and Matched Stayins

Satisfaction of Receiving Various Grades

One section of the questionnaire asked students to indicate their satisfaction in receiving a "B", "C", or "D" average during the ninth grade.

No differences occurred between dropouts and matched stayins (Table 79, p. 134).

Number of Summers Worked

Comparison of number of summers worked indicated that dropouts worked more summers than matched stayins (Table 80, p. 135).

Kind of Work Planned After Finishing School

There was no difference between dropouts and matched stayins regarding kind of work planned after completing school (Table 82, p. 136).

Number of Older and Younger Siblings

Dropouts had more younger siblings than did matched stayins (Table 84, p. 137). However, there did not appear to be any difference with regard to older siblings.

Number of Schools Attended

No difference was found between dropouts and matched stayins regarding the number of schools attended (Table 85, p. 137). Both groups reported an average of three schools attended.

Liking for Eighth Grade and High School

No difference was found between dropouts and matched stayins in terms of whether they liked eighth grade better than, the same as, or less than the lower grades (Table 89, p. 140). Similarly, dropouts and matched stayins did not differ regarding their expectations of liking high school compared to the eighth grade (Table 90, p. 140). It can be noted that even though they withdrew from school, dropouts anticipated liking high school better than the lower grade levels.

Subject Area Liked Best or Least

Results of the questionnaire indicated that there was no difference between dropouts and matched stayins regarding whether they liked academic subjects or non-academic subjects best or least (Table 91, 92, p. 141).

Repeated and Skipped Grades

Dropouts and matched stayins did not differ regarding how many students repeated or skipped grades (Table 93, 94, p. 142).

Future

Comparison between dropouts and matched stayins with respect to plans for going to college revealed no difference between the two groups (Table 95, p. 143). As many of the dropouts (about half) as stayins indicated they planned to attend college.

Mothers That Work

Dropouts and matched stayins did not differ significantly in terms of mothers working (Table 96, p. 143).

Parents Living

According to questionnaire results, dropouts and matched stayins did not differ on whether or not both parents were living (Table 97, p. 144). Approximately 90 per cent of both groups reported both parents living.

Parents Separated

Results indicate that more parents of dropouts were separated than of matched stayins (Table 98, p. 144). Approximately 30 per cent of the dropouts indicated parents that were separated, whereas only 10 per cent of the matched stayins reported separated parents.

Living With Parents

Fewer dropouts than matched stayins live with both parents (Table 99, p. 145). This difference was significant with 56 per cent of the dropouts and 75 per cent of the matched stayins reported living with both parents.

Analysis of Combinations of Variables

In order to make findings more applicable to the school situation, an attempt was made to determine the best combination of variables which differentiate between dropouts and stayins. The discriminant function was used for this analysis and applied to (1) dropouts and matched stayins and (2) dropouts and randomly selected stayins.

Since the discriminant function program available for the 709 IBM computer was limited to a maximum of 150 cases in any one group, a random sample was selected from the total stayin population, by use of a table of random numbers.

A further limitation of the discriminant function required that all students have complete data on all variables. The resulting totals for dropouts and matched stayins numbered 83; for dropouts and randomly selected stayins, 77 and 133 respectively.

The discriminant function for the dropouts and matched stayins was used to analyze the following eight variables in combination: (1) GPA in academic subjects: English, arithmetic, social studies, and science; (2) days absent from eighth grade; (3) hours of work per week; (4) number of younger siblings; (5) participation in arts and science ativities; (6) participation in sports activities; (7) participation in clubs and school service activities; and (8) attitude toward school.

The following twelve variables were selected for use in the discriminatory problem for dropouts and randomly selected stayins: (1) language study skills from the MAT; (2) father's occupation; (3) father's education; (4) participation in arts and science activities; (5) participation in clubs and service activities; (6) attitude toward school; (7) attitude toward teachers; (8) self-estimate of grades; (9) hours of work per week; (10) days absent from eighth grade; (11) problems related to school; and (12) GPA in academic subjects.

Mahalanobis distance function (D^2) and corresponding optimal weights for each of the variables were computed to provide a linear compound, thereby reducing the problem to a single variate. The resulting discriminant function maximally differentiated students into either a dropout or stayin group. The F ratio was computed to test the significance of the D^2.

Table 100, p. 146 gives the mean values and differences of the eight variables for dropouts and matched stayins selected to optimize the classification of students. Table 102, p. 147, gives the comparable values for dropouts and randomly selected stayins.

Discriminant weights for each of the variables together with D^2 and F values for dropouts and matched stayins are presented in Table 101, p. 146 Table 103, p. 148, includes discriminant weights, D^2, and F values for dropouts and randomly selected stayins. The F values in these tables indicated that all D^2 values were significant. Examination of D^2 values revealed that the best discrimination between dropouts and stayins resulted from the combination of all eight variables for dropouts and matched stayins, and all twelve variables for dropouts and randomly selected stayins.

Analysis Using Dropouts and Matched Stayins

Discriminant weights in the eight variable analysis and the four variable analysis for dropouts and matched stayins showed little difference. An adaptation of Rao's (1952) test indicated that no significant loss in discrimination occurred in reducing variables from eight to four. The four variables in this analysis were : (X_2) number of days absent from eighth grade; (X_3) number of hours work per week; (X_4) number of younger brothers and sisters in the family; and (X_8) attitude toward school.

To estimate how accuate this four variable function would discriminate, the probability of classifying students to the wrong group was determined. With $D^2 = 0.4859$, the normal deviate yielded a value of 0.339 which, when entered into the normal curve table indicates that correct classification of the dropouts and matched stayins would occur about 60 per cent of the time.

Obviously, a discriminant function based on this matched sample would result in considerable error of classification. Since this dropout group was identified at the end of the first semester in ninth grade, it is possible that many of the matched stayins will also drop out of school within the remaining three and one half years. If a sample of stayins at the end of the twelfth grade could be matched with the dropouts up to that point, a more valid discriminant function could be developed.

Analysis Using Dropouts and Randomly Selected Stayins

Discriminant weights in the twelve variable analysis for dropouts and randomly selected stayins produced a D^2 which was not significantly higher than when only four variables were used.

The four variable combination for classifying students as dropouts or randomly selected stayins included: (X_1) scores of MAT language study

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1.0
4.5
5.0
5.6
6.3
7.1
8.0
9.0
2.8
3.2
3.6
4.0
2.5
2.2
2.0
1.1
1.8
1.25
1.4
1.6

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963

skills; (X_3) educational attainment of the father; (X_5) degree of participation in clubs and school service; and (X_6) attitude toward school.

To estimate how accurate these four variables would classify the dropouts and randomly selected stayins as dropout and stayin, the probability of the error in classification was determined. With a D^2 of 0.8534, the normal deviate of 0.462 yielded a probability of approximately .32. Thus, in classifying students as dropout or stayin using the four variable function, approximately 68 per cent of such classification may be expected to be correct.

The following discriminant equation was developed from the foregoing analysis:

$$Y = -0.001274X_1 - 0.0007478X_3 - 0.0001542X_5 - 0.0001641X_6$$

Where X_1 = MAT language study skills score (stanines)

X_3 = educational attainment of the father (level of attainment)

X_5 = degree of participation in clubs and school service (score on activities inventory)

X_6 = attitude toward school (raw score attitude toward school)

The mean computed Y values for stayins and dropouts was -0.0266 and -0.0225 respectively. Based on these values, the middle value becomes -0.0245. By assigning all students below -0.0245 to the stayin group, and all those above this value to the dropout group, optimal classification from this discriminant function can be obtained. A student with a Y value of -0.0600 would be assigned to the stayin group.

Although the accuracy of classification leaves something to be desired, the possibility in the above function does provide a procedure by which schools can identify potential dropouts. As more dropouts occur from the study population and are included for analysis in the discriminant function, accuracy of classifications should be increased.

Summary

Dropouts did not differ from either total stayins or matched stayins on Stanford Achievement Tests which were administered during the fourth grade. Although dropouts scored significantly lower than total stayins on Metropolitan Achievement Tests in the eighth grade, no difference was found between dropouts and matched stayins.

Dropouts scored lower on the School and College Ability Tests than total stayins. Dropouts also obtained lower grades. However, when dropouts were matched with a group of stayins on the ability scores, dropouts received lower grades. This suggests that even though grades are highly related with ability, other factors appear to be important in determining grades, particularly for the dropout. Although dropouts' estimates of their own grades were lower than for total stayins, no difference was apparent between dropouts and matched stayins.

When compared with all stayins, dropouts missed almost twice as much school and worked about twice as many hours per week. Absence from school was associated with lower achievement, lower self-estimate of grades, less participation in extracurricular activities, lower attitude toward school, lower socioeconomic status of the home, more hours of work per week, a greater number of schools attended, and more personal problems.

Although dropouts checked more problems than total stayins related to school, money, work, and future, no difference occurred between dropouts and matched stayins. There appeared to be no difference between dropouts and either stayin group regarding problems with people in general. Number of personal problems showed a positive relationship with attendance, hours worked outside of school, and number of schools attended.

Dropouts' attitude toward school was significantly lower than either total and matched stayins. No other difference in attitude occurred between dropouts and matched stayins. Dropouts were significantly lower than total stayins in attitudes toward tests, mathematics, homework, English, social studies, grades, classmates, science, teachers, and total attitude but did not differ in attitudes toward reading, writing, and physical education. Except for physical education, a significant relationship occurred between all attitudes and measures of achievement, ability, and academic grades.

Compared with all stayins, dropouts participated less in the extracurricular activities of arts and science, clubs and school service. Although dropouts and total stayins did not differ in amount of participation in sports activities, a significant difference occurred between dropouts and matched stayins. Amount of participation in all activities was positively related with measures of achievement, ability, academic grades, and attitudes.

No differences were found between dropouts and matched stayins concerning satisfaction in receiving a "B", "C", or "D" average during the ninth grade; kind of work planned after finishing school; number of older siblings, number of schools attended; liking for eighth grade and high school; best or least liked academic and non-academic subjects; skipping or repeating grades; plans for going to college; mothers working; and whether both parents were living.

Compared with matched stayins, dropouts worked more summers, had more younger siblings, were more likely to have parents who were separated, and were less likely to live with both parents.

Results of the discriminant function indicated that the best discrimination between dropouts and matched stayins occurred from the combination of the following four variables: number of days absent from eighth grade, number of hours worked per week, number of younger siblings, and attitude toward school. Although correct classification could be expected to occur about 60 per cent of the time with these four variables, dropout cases added from the study population at the end of the twelfth grade should improve the discriminant function.

For dropouts and total stayins, the four variable combination found most useful in identifying potential dropouts included: scores of MAT language study skills, educational attainment of the father, degree of participation in clubs and school service, and attitude toward school. Identifying potential dropouts with these four variables would result in approximately 68 per cent correct classification. Here too, additional dropout cases should improve the method of discrimination.

CHAPTER V

RELATIONSHIP OF DROPOUT CHARACTERISTICS TO FOURTH GRADE DATA

Rationale and Purpose

Since about seventy-eight per cent of early school leavers complete the eighth grade (NEA, 1963b), it seems natural that the area of concentration for drop-out studies is the high school. However, both compulsory attendance laws and parental authority contribute to the holding power of the schools, and these are most influential during the early years. Therefore, the age of leaving school does not exclude the possibility that the decision to leave school is dependent upon experiences encountered early in the school career.

Characteristics of dropouts, as revealed by research, include several characteristics which may be manifested early in the pupil's school career. Such factors as reading disability, low scholastic aptitude, retardation in school, consistent failure to achieve in regular school work, low scores on achievement measures, low family socioeconomic status, frequent changes of schools, excessive absence, and poor peer relationships, may be sufficiently noticeable in the elementary grades. Early remedial measures to improve the individual's school experiences may relieve tendencies toward premature termination of his school career.

It is possible that research findings from studies of actual dropouts may be better utilized in early identification of potential dropouts and in continuing work with such pupils to improve the possibility of their completing high school.

In this portion of the study, factors already isolated at the high school level as related to a person's decision to leave school were utilized in analyzing data present in the cumulative record folders of fourth grade pupils.

The specific purpose of this part of the study was to analyze these data to determine the following:

1. To what degree are dropout factors which have been isolated at the high school level present and identifiable at the fourth grade level?
2. Can patterns which identify potential dropouts be established for the fourth grade from factors isolated at the high school level?
3. What areas of school curriculum appear to be most closely related to the dropout factors?

The following hypotheses are important to this phase of the study, but can only be tested by a longitudinal study following this fourth grade class through high school.

1. Individual characteristics are persistent and stable over a number of years.
2. Factors which are identified as having a high relationship to dropout will have a similar relationship to a predisposition to dropout when manifested at the fourth grade level.

All data analyzed in this part of the study were collected from permanent records of fourth grade pupils. While this fact limits the scope of the study to information directly obtainable from school records, it provides for application of the results to information normally available to school personnel, and may suggest areas where more information would be helpful.

Population

Data were collected on the entire fourth grade population of Spokane School District 81, with the exception of pupils registered in special classes. Approximately 3000 pupils registered as fourth graders in June, 1962 were included in the study.

Variables Considered

Variables thought to be pertinent were the following: intelligence, scholastic achievement, school adjustment, and certain school related experiences.

Sources of measurement for the selected variables were:

1. Intelligence--Lorge-Thorndike Intelligence Test
2. Scholastic Achievement--Stanford Achievement Test, grade 3; Metropolitan Achievement Test, grade 4
3. School Adjustment--grades, years retardation, attendance, health
4. School Related Experiences--schools attended, number of residences listed during the pupil's school career, parents' marital status, number of siblings, family socioeconomic status
5. Personal and Social Adjustment--teacher comments as recorded in the pupil's growth summary, records of special service help.

Procedure for Collecting Data

All data except intelligence test scores were collected during August, 1962. The Lorge-Thorndike Intelligence Test was administered in the schools during September, 1962 as a part of the school's regular testing program. Pupil's scores were then coded by the Spokane research office and sent to Washington State University, where they were transferred to the pupil data sheets.

Confidentiality of records was maintained by assigning a code number to each pupil and transferring data by code number rather than by name. Code lists were retained in the Spokane school district offices so that findings might subsequently be translated into action by appropriate school district personnel.

Data Processing

Since all data were recorded on data processing cards, certain concepts which were stated verbally had to be translated into numerical language for computer processing. Explanations of these interpretations are given below.

Grades

At the time the data were collected, the Spokane School District was in the process of revising its elementary report card. Six schools were using an experimental form, and the remaining schools used the form in use during the preceding years. All marks were translated into a five point scale which would be comparable to the letter grades used in the higher grades.

The experimental form utilized both a comparative mark showing the pupil's achievement in relation to expectations for his grade level and a personal mark showing the pupil's progress in terms of his own apparent ability. It used the conventional five letter grades. With minor revisions, this report form has now been adopted as the standard form in the elementary schools.

The old form combined personal and comparative achievement into a single mark on a four point scale (high quality work, satisfactory progress, finds work difficult, capable of doing better). Assignment of grades was accomplished by checking the appropriate column.

Both forms are quite detailed, giving marks on more than forty specific areas. Since many are related, combinations were made for statistical treatment. The following ten major areas were used: reading, English, spelling, social studies, arithmetic, science, fine arts (music and art), physical education, health, and personal growth. Individual items from both forms were placed into these categories. Although the two forms did not coincide exactly, it was possible to group comparable marks under the same headings.

Only current reports (final fourth grade) were used in this study.

Academic Growth Summary

In place of a grade point average, the Spokane cumulative record shows an academic growth summary for each year. Five items comprise this summary:

1. Reader level____
2. Progress: Satisfactory____Finds Work Difficult____
3. Needs Help In__________________________________
4. Special Instruction Given In____________________
5. Most Outstanding Area(s)______________________

This summary was used to provide information concerning school adjustment only when a pupil's record was complete for all four years. Reader level was computed by taking a base level and figuring deviation from this level (one year below, slightly below, average, slightly above, one year above), and then averaging for the four years.

The scores for each of the other four areas were derived by totalling responses over the four year period.

Personal Growth Summary

The most direct measures of personal and social adjustment available were collected from the annual comments recorded by teachers in the "personal growth" section which is part of the annual progress report on the cumulative folder.

The following guidelines are printed in the section:

1. Accepted as a friend by the group Yes___No___
2. Uses time wisely Yes___No___
3. Assumes responsibility Yes___No___
4. Needs help in____________________
5. Most outstanding area(s)________________

District guides suggest that the first three above be marked by checking either the yes or no space. There are no standard responses indicated for the last two. Thus, both specific and general comments are made.

For the alternative spaces (1-3), the report was summarized by summing the "yes" responses over the four year period. A pupil who had been checked as "Accepted as a friend by the group" all four years received a score of four. Any response variation between yes and no (i.e. sometimes) was treated as a negative response.

Spaces four and five were summarized by totalling all responses in the block over the four year period. This allowed for considerable variation, since differences between teachers as well as between pupils influenced the total. One teacher might list four areas of needed help and the next teacher list none. This variation might be due to pupil improvement or to a difference in teacher's stress of these particular areas. It was assumed that by summing over the four year period, variation in teachers would be minimized. An initial attempt to weight responses was given up as impractical, since bias seemed more probable from the judgment of these responses.

One judgement was made, however. Responses which were clearly academic in nature were tallied with academic progress rather than with personal and social progress.

Records of Special Service Help

An additional source of personal and social adjustment was evidence of help given by special service personnel of the school district. Factors such as speech therapy, psychological or psychiatric help, and special reading classes were included in this category.

Health

Health problems were classified according to major systems of the body: eye, ear, nose, and throat; orthopedic defects; excretory system; gastro-intestinal system; glandular system; circulatory system; and nervous system. Since information included on health cards does not comprise a complete health record, the extent of a particular problem was not known, and the data were used as approximations. They provided a check for certain school related problems, were used to obtain a total health problem figure for the correlation matrix (Table 3, p. 93), and provided a distribution of health problems by categories (Table 111, p. 151).

Analysis of Data

In order to more adequately describe the population, distributions of certain characteristics were made. Forty-one variables were intercorrelated, and selected variables were correlated with four dichotomous variables. An attempt was made to determine critical points between eighth grade dropouts and stayins on selected variables in order to predict the dropout attribute for fourth graders. The method followed the "principle of maximum likelihood" (Guilford, 1956).

Descriptive Facts

In analyzing the data, certain facts descriptive of the population emerged. Although more than half of the fourth grade pupils were born in Spokane, every state except Delaware was represented in this grade level (Table 104, p. 149).

Two-thirds of the pupils had lived at the same address since beginning school in Spokane, but some had lived in several places--eighty-seven having lived at four or more addresses (Table 105, p. 149).

Almost half of the fourth grade pupils had attended more than one school; almost two hundred had attended four or more schools in their four years of school attendance (Table 106, p. 150).

Approximately four-fifths of these pupils lived with both parents (Tables 107, 108, p. 150), and almost two hundred of them had repeated one or more grades (Table 109, p. 151). However, only about 150 had received special remedial help of some kind outside of the classroom (Table 110, p. 151).

About two hundred fifty pupils at this grade level had some kind of health problem listed (Table 111, p. 151).

Intellectual Ability

Intellectual ability showed a high positive relationship to all segments of scholastic achievement and school adjustment: pupils of higher ability scored higher on achievement tests and received higher grades. They received higher grades in health and physical education less often than in other subjects.

Parents of higher ability pupils worked in occupations rated higher on the Duncan Index. Pupils with higher ability moved less often and transferred from one school to another less often. They were likely to have fewer siblings, more likely to live with both parents, and more likely to have been born in Spokane.

Higher ability was associated with satisfactory personal and social growth: correlations indicated that pupils of higher ability were accepted by the group, used their time wisely, showed more responsibility in the classroom.

There was a strong negative correlation between intelligence and responses indicating need for help, either academic or personal, and between intelligence and special instruction and number of grades repeated (Table 3, p. 93, Table 112, p. 152).

Personal and Social Adjustment

Variables included in personal and social adjustment were evidence of remedial help by special service personnel, and teachers' comments on the following: acceptance as a friend by the group, uses time wisely, assumes responsibility, areas needing help, and most outstanding areas.

Use of time and responsibility correlated highly, suggesting that they might be measuring a common characteristic. They correlated highly with all measures of ability, achievement, and school adjustment. Acceptance as a friend by the group also showed significant, but lower positive correlations with measures of ability, achievement, and school adjustment. Of all school grades, grade in science showed the lowest correlation with acceptance.

Father's occupational level showed low positive correlations with acceptance, use of time, and responsibility; however, mother's occupational level showed a slight negative correlation with acceptance.

A person high on acceptance, responsibility, or use of time was more likely to have lived at the same address during his school career, was more likely to have attended only one school, less likely to have repeated a grade. He was less likely to have needed help in either an academic or a personal area (Table 3, p. 93). In terms of these measurements, pupils born in Spokane had a stronger probability of achieving personal and social adjustment in the Spokane Public Schools. A pupil high on acceptance, responsibility, or use of time was more likely to be living with both of his parents (Table 114, p. 153).

Whether or not a pupil received special instruction showed a consistent negative relationship to measures of school adjustment, achievement, and scholastic aptitude, as did need for help in personal areas. Special instruction also showed a negative relationship to whether or not a pupil was born in Spokane, suggesting that pupils born in Spokane were more likely to receive special help (Table 114, p. 153).

Achievement

The various achievement scores showed high positive intercorrelations, and generally high correlations with all grades, those for health and physical education being the lowest. Achievement scores also showed consistent negative correlations with grades repeated. Higher achievement was positively correlated with father's and mother's occupational level, use of time, and responsibility. A pupil with high achievement scores was likely to come from a family which had fewer children and lived at the same residence during the pupil's school years. Amount of absence showed little relationship to achievement.

Pupils with high achievement had little special instruction and had more outstanding areas (Table 3, p. 93).

High achievement scores were related to the pupil's living with both parents, and showed a slight negative relationship to whether a person had a health problem, with reading achievement most strongly related to good health (Table 112, p. 152).

School Adjustment

Pupils with higher grades tended to be rated higher in use of time and responsibility, and to have more outstanding personal areas. They scored higher on intelligence tests, repeated fewer grades, had fewer health problems, and were more likely to live with both parents. Father's occupational level showed a lower relationship to grades in school than to achievement scores, and neither father's nor mother's occupational level was related to number of grades failed.

There was very little relationship between grades received and amount of special remedial help. Pupils born outside of Spokane were reading at a lower level than pupils born in Spokane (Table 3, p. 93, Table 115, p. 154).

Relationship to the Eighth and Twelfth Grade Findings

Prediction by Determination of the Critical Point of a Dichotomy

Twelve variables common to the eighth and fourth grade were tested for a critical point to determine maximum likelihood for placement in dropout or stayin classification. Large variances and the small proportion of dropouts located the critical point beyond the continuum, making prediction for the fourth grade impossible.

Descriptive Comparisons

Results from the twelfth and eighth grade portions of the study indicate that factors of participation in the school program and identification with the school are important to staying in school. They also indicate that success in school is important. Analysis of eighth grade data suggested that attending several schools is related to the dropout, and found that many dropouts have incomplete data, partly because of changing schools. Fourth grade correlations showed lower ability, lower achievement and less remedial help for pupils attending more schools.

Intercorrelations of fourth grade variables show certain similarities between the three grade populations. These similarities suggest curricular modifications which may aid in school adjustment. Occupation level shows positive relationships to measures of ability and achievement for all levels. Number of siblings is negatively related to measures of achievement. Retardation was negatively related to all measures of ability and grades in school.

Summary

Although the elementary reporting system differs from that used in the secondary schools, an attempt was made to provide comparable data wherever possible. Forty-one variables were intercorrelated, and relationships between variables were noted.

The secondary dropout samples in this study were not large enough to make prediction at the fourth grade level possible at this time; further analysis when the eighth grade population has completed high school may provide an adequate sample.

Relationships between high school and fourth grade factors do, however, suggest modifications to increase the schools' holding power.

The population showed a diverse geographical background, and correlations indicated that pupils with a local background scored higher on all achievement measures. Increased classroom participation of new pupils might be helpful.

Fourth grade pupils who were high in achievement tended to score high on intelligence measures, school adjustment, and personal and social adjustment, and to have fewer problem areas in school.

CHAPTER VI

GENERAL SUMMARY AND IMPLICATIONS

Summary of Findings

The present study proceeded at the twelfth, eighth, and fourth grade levels. Insofar as possible, similar data were collected at each grade level to facilitate comparisons. Special emphasis was placed on variables which appeared to differentiate between students who plan to attend college and those who do not, and students who stay in school and those who drop out. Variables isolated at the twelfth and eighth grade levels were used in analyzing available data at the fourth grade level.

An attempt was made to obtain data on all students in grades twelve, eight, and four, involving a population of approximately seven thousand boys and girls. Data were collected on these students before they discontinued their education. Previous studies have repeatedly shown the extreme difficulty of attempting to collect data on students after they have dropped out of school. Since approximately thirty per cent of dropouts, according to national surveys, do not complete eighth grade, some students had dropped out prior to the time of data collection. Absences at some of the data collection sessions also suggested that some of the students at the twelfth and eighth grade levels may have dropped out during this period.

Variables used in comparisons between dropouts and stayins or college and non-college students were summarized and possible interpretations of similar data at the fourth grade were considered. Combinations of variables at the twelfth and eighth grades were analyzed to further determine differences between students who continue and those who do not continue their education. In many of the comparisons, differences between the groups on intellectual ability were controlled by matching or by analysis of covariance procedures. Wherever possible, analyses were made with effects of socioeconomic status and difference in sex controlled.

Intellectual Ability

In general, when comparisons involving measures of intellectual ability were made, stayins or students going on to college recorded higher scores, particularly in areas involving verbal facility. This finding is consistent with previous research. However, when differences in ability were partialed out, stayins and dropouts still differed on a number of other variables, suggesting that variables other than intellectual ability are also associated with a student remaining in school.

Standardized Achievement Measures

No significant differences appeared between eighth grade dropouts and stayins on Stanford Achievement measures given in the fourth grade. This suggests that this fourth grade achievement measure can not be used to identify the potential dropout. Significant differences did occur between eighth grade dropouts and total stayins on the Metropolitan Achievement Test given in the eighth grade. Dropouts scored lower than stayins on reading comprehension, language study skills, arithmetic problem solving, social science information and science. The largest difference appeared on language study skills. When comparisons were made between dropouts and matched stayins, no significant difference occurred. However, the matched stayin group contained a number of students who may drop out of school in the remaining semesters of high school.

School Adjustment

Grades

Stayins, as would be expected, obtained higher grades than dropouts even when intellectual ability was equated. Students with favorable attitudes who were not going to college, however, obtained higher grades than students with less favorable attitudes who were planning to attend college. The grade point average for the high favorable not going group was over a 2.00 in all subjects. The majority of the eighth grade dropouts had a sufficiently high grade point average to indicate that they could finish high school, and a number had a high enough grade point to suggest that they could succeed in college.

Courses Failed and Years Retarded

At the twelfth grade level, forty-two per cent of the boys and thirteen per cent of the girls had failed at least one course. Students going to college failed fewer courses. Eighth grade dropouts did not repeat more grades than the matched stayins, a fact which may be due to the limitation of the particular matched sample. Had comparisons been made between dropouts and total stayins the results would probably have been consistent with findings at the twelfth grade level.

Attendance

Eighth grade dropouts missed more school than either total stayins or matched stayins. More absence from school was associated with lower intellectual ability, poorer academic grades, lower attitudes toward school, lower socioeconomic status of the home, more hours worked per week, more schools attended and more personal problems. These findings were consistent for both the eighth and twelfth grades. Number of days absent correlated significantly with relatively few variables at the fourth grade level.

School Related Experiences

Part Time Work

Twelfth grade boys not planning to go to college worked at outside jobs more than those planning to go to college. Dropouts at the eighth grade level worked more than stayins. No attempt was made to determine whether these findings demonstrated a financial need or need for achievement.

Car Ownership

Fewer students planning on going to college owned cars.

Number of Residences and Schools Attended

Dropouts and students not planning to attend college reported having lived at more different residences and having attended more schools. Analysis of fourth grade data indicated that pupils attending fewer schools performed better in most areas of school work. Pupils who moved frequently were less likely to receive special help. Students who moved frequently had less data in their folders which could be used to assess weaknesses.

Socioeconomic Status

Father's occupational level correlated positively with all measures of ability and grades. These findings appeared consistent for all grade levels. Students who planned to attend college had parents with higher occupational levels than students who did not plan to attend college. Eighth grade stayins represented higher occupational levels than dropouts.

Mother Works

Analysis of data on the twelfth, eighth, and fourth grades respectively indicated that approximately one-half, one-third, and one-fifth of the mothers worked. There did not appear to be any significant difference between dropouts and stayins, or college and non-college students on whether or not the mother worked.

Parents Separated

Students planning to attend college did not differ significantly from students not planning to attend college on whether or not their parents were separated. However, when comparisons were made at the eighth grade level, more parents of dropouts were separated than were parents of matched stayins. Fourth grade pupils who lived with both parents recieved higher scores on measures of ability and achievement than pupils who did not live with both parents.

Extracurricular Activities

Participation in school clubs, student government, and committee activities at the twelfth grade level was positively correlated with intellectual ability, grades, and attitudes. Similar findings were evident at the eighth grade, where the activities included dramatics, music, art, science, clubs, student government, and school service. Most correlations at the twelfth grade level between sports and intellectual ability or achievement were negative, but correlations at the eighth grade level were all positive.

Attitudes

Twelfth and eighth grade students with more favorable attitudes achieved better grades and participated more in activities than students with less favorable attitudes. Students with highly favorable attitudes toward school, not planning on attending college, obtained higher grade point averages than students with less favorable attitudes planning on attending college. These differences were still evident when the effects of different intellectual ability were partialed out. A student's attitude toward school appeared to be strongly associated with keeping him in school. Since a pupil's early school experiences are important in developing appropriate attitudes toward school, special attention needs to be placed on learning experiences which will result in more favorable attitudes.

Personal and Social Adjustment

Dropouts and students not planning to go to college checked more school related types of problems. Eighth grade dropouts also checked more problems related to money, work and future than did stayins. Fourth grade pupils who were making more satisfactory personal progress had higher achievement scores, made higher grades, and needed less special academic help.

Combination of Variables

Verbal skills appeared to be the most important aspect of intellectual ability in discriminating between dropouts and stayins. Grades in English, social studies, and natural science appeared more crucial at the twelfth grade than grades in other subjects. Participation in high school clubs, student government and class committees at the twelfth grade level and similar kinds of activities at the eighth grade level appeared associated with students remaining in school.

Combinations of variables which appeared important for predicting grades at the high school were intellectual ability, total attitude, father's occupation and either participation in high school clubs or the number of problems checked by the student. Either of these combinations produced a multiple correlation of .71. Although average days absent and hours worked per week made a contribution to the multiple regression equation at the high school level, they only increased the multiple correlation from .71 to .72.

When comparisons were made between dropouts and stayins matched on the basis of sex, socioeconomic status, and intellectual ability the following combination appeared to be most useful in predicting dropouts: number of days absent from the eighth grade, number of hours worked per week, number of younger siblings, and attitude toward school. When comparisons were made between dropouts and total stayins, the combination of variables found most useful in identifying the potential dropouts at the eighth grade level included: language study skills score on the Metropolitan Achievement Test, educational attainment of the father, degree of participation in clubs and school service, and attitude toward school.

Implications

1. Verbal facility and language study skills emerged as a strong determiner of a student's success in school and whether or not he remained in school. The development of basic skills in these areas during the elementary years becomes increasingly important. Provision of adequate personnel and facilities to stimulate pupils in the basic areas of reading and writing is necessary in the development of these skills. Although no attempt was made in this study to compare the level of pupils' performance in these areas with other schools in the nation, it appeared that, in general, students in this district performed above the national norms. Increased emphasis on diagnosis of special difficulties in these areas and the provision of remedial work should increase the holding power of the schools. An assessment might well be made to determine whether or not sufficient specialists are available in the district. Encouragement to expand school

and public libraries should help. Special classes during the regular school year and summer months, or pre-school experience for youngsters, particularly from culturally deprived families, are other possibilities that should be considered to help children remain in school longer. Families that moved a number of times frequently represented the lower occupational levels.

2. Student's attitudes toward school appeared to be an important factor associated with keeping them in school. Students with more favorable attitudes toward school learn more than students with less favorable attitudes. Whether a child has a positive or negative attitude toward school may indicate whether or not he will learn what is being taught. The eighth grade students, as a whole, demonstrated favorable attitudes toward all aspects of school studied. Their most favorable attitudes were displayed toward reading, classmates, school, physical education, writing, mathematics, and teachers. The lowest attitudes, although positive, were displayed toward homework, tests, and grades. The above interpretations are based on mean scores. Students who were less successful in school generally indicated less favorable attitudes. Students who dropped out of school displayed less favorable attitudes. Emphasis on kinds of activities which foster favorable attitudes towards a subject while developing competence in that area should be encouraged. Experiences in which a student achieves success generally result in more favorable attitudes. Modifications such as the new report system adopted in the elementary grades should contribute to students' feelings of success.

3. Participation in activities appeared to be associated with students remaining in school. High school clubs, student government, and class committee activities were most important at the twelfth grade level. Clubs, student government, and arts and science activities were most

important at the eighth grade level. Participation in sports at the eighth grade level appeared more important than participation in intramurals or interscholastic activities at the twelfth grade level. It was evident during the study that a large number of activities are made available in the district. No attempt was made to evaluate whether sufficient activities are provided for all students who want to participate in them or why certain activities seemed more important than others. Further study of extracurricular activities may prove helpful.

4. Students with parents in higher level occupations tended to remain in school longer. It was impossible from this study to determine whether this was due to parents' encouragement of students to remain in school, cultural advantages provided by these homes, or more liberal financial resources of the family. Other studies have examined the hidden tuition costs in free public school programs. However, no attempt was made in this study to determine what fees are charged to a student. If these costs are substantial, they will indeed work a hardship on a number of students. Keeping these costs to a minimum should increase the holding power of the schools.

5. Findings at the twelfth grade level suggested a need for more vocational planning. Both twelfth and eighth grade dropouts checked more problems related to work and future than stayins. These students demonstrated a need for a better understanding of their own capabilities and of opportunities open to them before they can make intelligent decisions about future plans.

No attempt was made to determine whether the district provides sufficient guidance personnel. The guidance personnel in the district helped materially in the study and displayed understanding of the problems related to student dropouts.

6. Failing courses or repeating grades appeared to be variables which differentiated between dropouts and stayins. Approximately forty-two per cent of the boys and thirteen per cent of the girls in the twelfth grade had failed at least one subject. No attempt was made in this study to examine grading practices or causes of failure in particular courses. The high percentage of failures suggests that additional counseling be provided to help students carefully evaluate their course load in terms of their capabilities and performance in prerequisite courses. Special help sessions might also be considered.

7. Dropouts attended more schools than stayins. Students who had attended more schools received lower grades, and appeared less likely to receive special remedial help. Obviously a student has to be in a district for a certain period of time before his strengths and weaknesses can be assessed. A special effort to become acquainted with new students should contribute to the holding power of the school.

8. Cumulative records provide most of the information available in the school on a particular student. Records in the elementary school reflected thoughtful teacher comments appraising pupils' strengths and weaknesses and indicating that remedial help was needed and had been provided. Similar comments were evident at the secondary school level. The uniform cumulative folder used at the elementary grade level greatly facilitated data collection. A uniform record system at the secondary level would facilitate transfer of student data between schools.

9. Attendance, particularly during the junior high school and high school years, was an important indicator of a student dropping out of school. Accurate records appeared to be kept in all schools. The practice of

reporting dropouts to the central office immediately, implemented by the research director during this study, was helpful in assessing the seriousness of the dropout problem. A similar procedure with respect to absenses might be considered.

Recommendations for Further Study

Data were collected on a large number of variables for approximately seven thousand students. The terminal date for the project limited analysis to a relatively small dropout group. The benefits derived from a longitudinal study utilizing present data would far outweigh the costs involved in analysis. To provide maximum results from the data collected the following studies are recommended:

1. The twelfth grade population going on to college should be followed up and comparisons made between students who complete college and those that do not complete college. No additional data from the students would be needed to made this follow-up study possible.

2. The eighth grade population should be followed through high school so that comparisons can be made between total dropouts during the four high school years and those students who remained in school. Present comparisons were limited to a dropout sample which included only those students who dropped out between the end of the eighth grade and the end of the first semester of the ninth grade. No additional data would be needed to make this longitudinal study possible.

3. The fourth grade population should be followed through high school in order to determine more adequately the variables at the fourth grade that are most crucial in keeping students in school. Additional data should be obtained on attitudes, preferably before the eighth grade, and on participation in activities during the eighth grade.

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APPENDIX A

INSTRUMENTS

Name ____________ Sex ___ Age ___ Date of Birth ____________ Grade 12

School ____________ Health Problem: Yes ___ No ___ Explain ____________

Differential Aptitude Test

Verbal ______
Numerical ______
Abstract ______
Space Relations ______
Mechanical ______

School and College Ability Test

Verbal ______
Non-Verbal ______
Total ______

Kuder Preference Record

Mechanical ______
Computational ______
Scientific ______
Persuasive ______
Artistic ______
Literary ______
Musical ______
Social Service ______
Clerical ______

Days Absent: 9th ___
10th ___
11th ___
12th ___
Total ___

Number in class ___
Class Rank ___
Grade Point Average ___
Total Credits ___

SUBJECT PATTERN

Subject	Grade
English	1 ___ 2 ___
English	3 ___ 4 ___
English	5 ___ 6 ___
English	7 ___ 8 ___
Dramatics	1 ___ 2 ___
Dramatics	3 ___ 4 ___
Speech	___
Debate	___
Vocabulary	___
Journalism	___

Subject	Grade
Wash. Hist.	___
Geography	___
World Hist.	1 ___ 2 ___
Amer. Hist.	1 ___ 2 ___
Amer. Gov.	___
Economics	___
N. W. Hist.	___
Current Aff.	___
Psychology	___
Sociology	___
Civics	___

Subject	Grade
Gen. Math	1 ___ 2 ___
Algebra	1 ___ 2 ___
Algebra	3 ___ 4 ___
Geometry	1 ___ 2 ___
Sol. Geom.	___
Trigonom.	1 ___ 2 ___
Math. Anal.	1 ___ 2 ___
Senior Math	___

Subject	Grade
Latin	1 ___ 2 ___
Latin	3 ___ 4 ___
Spanish	1 ___ 2 ___
Spanish	3 ___ 4 ___
French	1 ___ 2 ___
French	3 ___ 4 ___

Subject	Grade
Gen. Sci.	1 ___ 2 ___
Biology	1 ___ 2 ___
Physics	1 ___ 2 ___
Chemistry	1 ___ 2 ___
Phys. Sci.	1 ___ 2 ___
Photography	___
Physiology	___
Geology	___

(Please do not write in this space)

	Credits	G.P.A.	Gr. Pts.
Total	___	___	___
English	___	___	___
Soc. Sci.	___	___	___
Math.	___	___	___
Language	___	___	___
Nat. Sci.	___	___	___
Tot. Acad.	___	___	___
Other	___	___	___

Attitude Scale

Tests ___
Math ___
Homework ___
Reading ___
English ___
Phy. Ed. ___
Soc. Sci. ___
Grades ___
Writing ___
Classmates ___
Science ___
Teachers ___
School ___
Total ___

Activities:

Fine Arts ___
H. S. Clubs ___
Intramurals ___
Interschool ___
Stu. Gov. ___
Committees ___
Assemblies ___
Other ___
Total ___

Problems:

	Under-line	Circle
ASW	___	___
FVE	___	___
CTP	___	___
Total	___	___

Questionnaire:

a ___
b ___
c ___
d ___
e ___
f ___
g ___
h ___
i ___
j ___
k ___
l ___
m ___
n ___
o ___
p ___
q ___
r ___
s ___

School ______________________ Student's Name ______________________

INVENTORY 1 SDO

On the following pages you are asked to answer questions which will help improve the program in your schools. Read the directions for each part carefully and answer each question as accurately as you can. Your parents, teachers, and principal will not read your answers.

Most of the questions can be answered by circling the number in the left hand column corresponding to the correct answer.

EXAMPLE: What is your age?
1. 16
[✓ 2.] 17
3. 18
4. 19

(By circling the 2. you are indicating that your age is 17.)

a. Do you plan to go to college?
1. no
2. yes
3. undecided

b. When you finish high school do you plan to
1. go to college first
2. go to business or vocational school first
3. enter the service and go to college later
4. enter the service and get a job later
5. enter the service as a career
6. get a steady job and go to college later
7. get a steady job and not go to college
8. get married right away
9. undecided

c. How many summers have you worked during your high school years?
1. none
2. one summer
3. two summers
4. three summers

d. How many hours a week do you work? (not counting summer work)
1. none
2. 0 - 2
3. 3 - 4
4. 5 - 6
5. 7 - 8
6. 9 - 10
7. 11 - 15
8. 16 - 20
9. 21 or more

e. Do you own a car?
1. no
2. yes

f. Can you use your parent's car?
1. no
2. yes, when I want to
3. yes, but only for special occasions
4. parents do not have a car right now

g. In what place, business, or organization does your father work?

____

h. What is your father's occupation? What does he do? Be as specific as you can.

____

i. Does your mother have a job outside the home?
1. no
2. yes, full-time
3. yes, part-time
If yes: what is her occupation? What does she do? Be as specific as you can.

____

j. How much formal education did your father have?
1. none
2. some elementary shcool
3. finished elementary school
4. some high school
5. finished high school
6. some college
7. finished college
8. attended graduate school or professional school after college
9. don't know

k. How much formal education did your mother have?
1. none
2. some elementary school
3. finished elementary school
4. some high school
5. finished high school
6. some college
7. finished college
8. attended graduate school or professional school after college
9. don't know

l. Which parents are living?
1. both
2. only mother
3. only father
4. neither

m. Are your parents separated?
1. no
2. yes
If yes: how long ago? ____________

n. Do you live with your
1. mother and father
2. mother and stepfather
3. father and stepmother
4. mother
5. father
6. other (write in: ______________)

o. How many brothers and sisters do you have that are;

older than you? 0 1 2 3 4 5 6 7 8

younger than you? 0 1 2 3 4 5 6 7 8

p. Have you repeated any grades in school?
1. no
2. yes
If yes: circle the grades repeated
1 2 3 4 5 6 7 8

q. Have you ever failed any high school subjects?
1. no
2. yes
If yes: which ones? ______________

____

r. Check the one subject area you like best.
1. science (physics, biology, etc.)
2. mathematics (algebra, geometry, etc.)
3. social science (civics, history, etc.)
4. English (including speech, journalism, etc.)
5. vocational (home economics, shop, typing, etc.)
6. physical education
7. foreign languages
8. fine arts (music, art, drama, etc.)
9. others (please list)

____

____

s. Please list the schools you have previously attended.
1. ______________________
2. ______________________
3. ______________________
4. ______________________
5. ______________________
6. ______________________

Activities

Indicate the appropriate category under each of the following activities. Circle the number preceding each statement which most accurately describes the degree of your present and/or past participation in that activity. You may circle more than one under each activity.

ART: I have
1. not participated in art.
2. produced some works of art.
3. entered my work in contests.
4. been mentioned in news for art.
5. received an award or prize for art.

BAND: I have
1. not participated in band.
2. been a member of the school band.
3. been first chair in the band or concert band.
4. been an officer in the band.
5. been a student director of the band.

CHORUS: I have
1. not participated in chorus.
2. been a member of the school chorus.
3. been a first chair or solo.
4. been an officer in the chorus.
5. been a student director of the chorus.

OPERA OR OPERETTA: I have
1. not participated in opera or operetta.
2. been in the chorus.
3. been in a minor solo part.
4. been in a major solo part.
5. been a student director.

SPEECH: I have
1. not participated
2. tried out for the speech team.
3. been on the speech team.
4. competed with other schools.
5. competed at the state level.

DRAMA: I have
1. not participated in drama.
2. had a minor role in a play.
3. had a major role in a play.
4. directed a play at school.
5. written a play used at school.

ORCHESTRA: I have
1. not participated in orchestra.
2. been a member of the school orchestra.
3. been first chair in the orchestra.
4. been a officer in the orchestra.
5. been a student director of the orchestra.

CHOIR: I have
1. not participated in choir.
2. been a member of the school choir.
3. been a first chair or solo performer.
4. been an officer in the choir.
5. been a student director of the choir.

DEBATE: I have
1. not participated in debate.
2. tried out for the debate team.
3. been a member of the team.
4. competed with other schools.
5. competed at the state level.

Others: Please list activity and degree of participation

______________, ____________________________;

______________, ____________________________.

Please list activities outside the school and indicate the kind of participation. (e.g. private music lessons, recitals, accompaniment.)

____________________, ____________________; ____________________, ____________________;

____________________, ____________________; ____________________, ____________________.

High School Clubs

PEP CLUB: I have
1. not participated in pep club.
2. been a member.
3. been an officer.

F.H.A.: I have
1. not participated
2. been a member.
3. been an officer.

THESPIAN: I have
1. not participated in Thespian club.
2. been a member.
3. been an officer.

Hi-Y: I have
1. not participated.
2. been a member.
3. been an officer.

Others: Please list and circle the number indicating degree of participation.

______________ 2 member, 3 officer.

______________ 2 member, 3 officer.

______________ 2 member, 3 officer.

______________ 2 member, 3 officer.

Sports - Intramural Competition

BASEBALL: I have
1. not participated in baseball.
2. been a member of a class or club team.
3. been a captain or co-captain of the team.

BOXING: I have
1. not participated.
2. been in class or club competition.
3. been a captain of the class or club team.

GYMNASTICS: I have
1. not participated in gymnastics.
2. been in class or club competition.
3. been captain of the class or club team.

TENNIS: I have
1. not participated in tennis.
2. been in class or club competition.
3. been captain or co-captain.

VOLLEY BALL: I have
1. not participated in volley ball.
2. been on a class or club team.
3. been captain or co-captain.

BOWLING: I have
1. not participated in bowling.
2. been on the class or club team.
3. been captain or co-captain.

BASKETBALL: I have
1. not participated in basketball.
2. been a member of a class or club team.
3. been captain or co-captain of the team.

FOOTBALL - FLAG OR TOUCH: I have
1. not participated.
2. been a membr of the class or club team.
3. been captain or co-captain.

SWIMMING: I have
1. not participated.
2. been in class or club competition.
3. been captain or co-captain.

TRACK: I have
1. not participated in track.
2. been in class or club competition.
3. been captain or co-captain.

WRESTLING: I have
1. not participated in wrestling.
2. been in class or club competition.
3. been captain or co-captain.

SOCCER or SPEEDBALL or COMBO-BALL: I have
1. not participated.
2. been on the class or club team.
3. been captain or co-captain.

____ (Write in other intramural sport if not listed.)

Sports - Interschool Competition

BASEBALL: I have
1. not participated in baseball
2. been student manager of the team.
3. been a member of the baseball team.
4. been one of the starting nine.
5. been a captain or co-captain.

GYMNASTICS: I have
1. not participated
2. been student manager of the team.
3. been a member of the team.
4. been number one man in an event.
5. been captain or co-captain of the team.

TENNIS: I have
1. not participated in tennis.
2. been student manager.
3. been a team member.
4. been number one singles or doubles.
5. been captain or co-captain.

VOLLEY BALL: I have
1. not participated in volley ball.
2. been student manager.
3. been a team member.
4. been a captain or co-captain.

ROOTERS: I have
1. not participated.
2. been a member of a special cheer section.
3. been a game songleader.
4. been a candidate for cheerleader.
5. been a cheerleader.

GOLF: I have
1. not participated
2. been a team member.
3. been captain or co-captain.

BASKETBALL: I have
1. not participated.
2. been student manager of the team.
3. been a member of the basketball team.
4. been one of the starting five.
5. been a captain or co-captain.

FOOTBALL: I have
1. not participated.
2. been student manager of the team.
3. been a member of the football team.
4. been one of the starting eleven.
5. been captain or co-captain of the team.

SWIMMING: I have
1. not participated.
2. been student manager of the team.
3. been a member of the team.
4. been a number one man in an event.
5. been a captain or co-captain.

TRACK: I have
1. not participated.
2. been student manager.
3. been a team member.
4. been number one man in an event.
5. been captain or co-captain.

WRESTLING: I have
1. not participated.
2. been student manager of the team.
3. been a member of the team.
4. been number one man in my weight.
5. been captain or co-captain.

____

(Write in other sport if not listed.)

Student GOVERNMENT

CLASS OFFICERS: I have
1. not participated.
2. been a committee chairman.
3. been nominated for class office.
4. been elected to class office.

STUDENT BODY OFFICER: I have
1. not participated.
2. been a committee chairman.
3. been nominated for office.
4. been elected to office.

CLASS COUNCILS: I have
1. not participated.
2. been nominated for class council.
3. been elected to class council.

BOYS OR GIRLS LEAGUE: I have
1. not participated.
2. been on a campaign committee.
3. been committee chairman.
4. been nominated to office.
5. been elected to office.

Class and Studentbody Committees

DANCE COMMITTEE: I have
1. not participated.
2. been a member.
3. been a subcommittee chairman.
4. been a committee chairman.

PROJECT COMMITTEE: I have
1. not participated.
2. been a member.
3. been a subcommittee chairman.
4. been a committee chairman.

OFFICE: I have
1. not participated.
2. been an assistant.
3. been a secretary.

Others: List those not mentioned here.

____

____

____

PROGRAM COMMITTEE: I have
1. not participated.
2. been a member.
3. been a subcommittee chairman.
4. been a committee chairman.

STAGE CREW: I have
1. not participated.
2. been a member.
3. been a manager.

SCHOOL PAPER: I have
1. not participated.
2. been a reporter.
3. been a department editor.
4. been an assistant chief editor.
5. been a chief editor.

YEARBOOK: I have
1. not particioated.
2. been a reporter.
3. been a department editor.
4. been an assistant chief editor.
5. been a chief editor.

Assemblies:

Please list the number of times you have appeared on assemblies and the nature of your performance.

____

____

____

____

____

List any other school related activity in which you have participated which is not included in this inventory.

____

____

____

School ____________________ Name ____________________

INVENTORY 2 SDO

This scale is a new method of measuring what words mean to people. There are no right or wrong answers, so simply indicate your first impressions or feelings about each word.

At the bottom of the page is a completed example of what you will be asked to do. Please refer to it as you read these instructions.

There are seven blanks. The position of each blank can be described by the term directly above it.

	Very Good	Quite Good	Slightly Good	Neutral	Slightly Bad	Quite Bad	Very Bad	
Good	___	___	___	___	___	___	___	Bad

	Very Unsociable	Quite Unsociable	Slightly Unsociable	Neutral	Slightly Sociable	Quite Sociable	Very Sociable	
Unsociable	___	___	___	___	___	___	___	Sociable

At the top of the example is the word "HOSPITAL." This is not any particular hospital. Whatever "HOSPITAL" means to you is what you are to think about.

Look at the first word pair:

Good X ___ ___ ___ ___ ___ ___ Bad

The idea of HOSPITAL was very good to me so I checked the blank closest to "good." Check only one for each word pair.

Make each item a separate decision. Be sure and put your check mark on the line provided.

Look over the example again to be sure you understand and then go on to the rest of the scale.

EXAMPLE

Describe: HOSPITAL

Good	X	___	___	___	___	___	___	Bad
Unsociable	___	___	___	___	___	X	___	Sociable
Kind	X	___	___	___	___	___	___	Cruel
Beautiful	___	___	X	___	___	___	___	Ugly
Successful	X	___	___	___	___	___	___	Unsuccessful
Meaningful	X	___	___	___	___	___	___	Meaningless
Negative	___	___	___	___	___	___	X	Positive
Boring	___	___	___	___	X	___	___	Interesting
Fair	___	___	X	___	___	___	___	Unfair
Worthless	___	___	___	___	___	___	X	Valuable
Pleasant	___	___	___	___	___	___	X	Unpleasant
Harmful	___	___	___	___	___	___	X	Beneficial
Necessary	X	___	___	___	___	___	___	Unnecessary

START HERE:

Describe: TESTS

Good	___	___	___	___	___	___	___	Bad
Unsociable	___	___	___	___	___	___	___	Sociable
Kind	___	___	___	___	___	___	___	Cruel
Beautiful	___	___	___	___	___	___	___	Ugly
Successful	___	___	___	___	___	___	___	Unsuccessful
Meaningful	___	___	___	___	___	___	___	Meaningless
Negative	___	___	___	___	___	___	___	Positive
Boring	___	___	___	___	___	___	___	Interesting
Fair	___	___	___	___	___	___	___	Unfair
Worthless	___	___	___	___	___	___	___	Valuable
Pleasant	___	___	___	___	___	___	___	Unpleasant
Harmful	___	___	___	___	___	___	___	Beneficial
Necessary	___	___	___	___	___	___	___	Unnecessary

Describe: MATHEMATICS

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: HOMEWORK

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: READING

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: ENGLISH

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: PHYSICAL EDUCATION

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: SOCIAL STUDIES

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: GRADES

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: WRITING

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: CLASSMATES

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: SCIENCE

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: TEACHERS

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: SCHOOL

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Name ______________________ School ______________________ Birth Date (Month-Yr.) ________ Grade 8

Sex ________ Health Problem: Yes _____ No _____ Explain ______________________

Stanford Achievement Test
4th Grade

Reading Paragraph Meaning ______

Reading Word Meaning ______

Spelling ______

Language Usage ______

Arithmetic Reasoning ______

Arithmetic Computation ______

Battery Median ______

Metropolitan Achievement Test
8th Grade

Word Knowledge ______

Reading ______

Spelling ______

Language ______

Language Study Skill ______

Arithmetic Computation ______

Arithmetic Problem Solving ______

Social Studies Information ______

Social Studies Study Skill ______

Science ______

School and College Ability Test
7th Grade

Verbal ______

Quantitative ______

Total ______

Differential Aptitude Test
9th Grade

Verbal ______

Numerical ______

Abstract ______

Space Relations ______

Mechanical ______

Kuder Preference Record
9th Grade

Mechanical ______

Computational ______

Scientific ______

Persuasive ______

Artistic ______

Literary ______

Musical ______

Social Service ______

Clerical ______

(Do not write in spaces below)

Questionnaire

a. ______

b. ______

c. ______

d. ______

e. ______

f. ______

g. ______

h. ______

i. ______

j. ______

k. ______

l. ______

m. ______

n. ______

o. ______

p. ______

q. ______

r. ______

s. ______

t. ______

u. ______

v. ______

w. ______

x. ______

y. ______

Activities

Fine Arts ______

Science ______

Sports ______

Stu Gov ______

Sch Club ______

Pep ______

Social ______

Service ______

Other ______

Total ______

Problems

S ______

MWF ______

FG ______

Total ______

WAT

1. ______
2. ______
3. ______
4. ______
5. ______
6. ______
7. ______
8. ______
9. ______
10. ______
11. ______
12. ______
13. ______
14. ______
15. ______
16. ______

AG ______

WD ______

FR ______

LD ______

Total ______

Subject Pattern

	Elementary School						Jr Hi Sch	
Subject	8_1	8_2	Av	8_3	8_4	Av	8A	8B
English								
Soc Stu								
Arith								
Science								
Total Av								
Health								
Gen Mus								
Chorus								
Band								
Orch								
Art								
Home Ec								
Ind Arts								
P E								
Total Av								

For recording grades, convert letter grades to numbers by using the following scale

A = 4
B = 3
C = 2
D = 1
F = 0

Attendance Record

Grade	Days Absent	Times Tardy
1		
2		
3		
4		
5		
6		
7		
8		

Attitude Scale

Tests ______

Math ______

Homework ______

Reading ______

English ______

Phy Ed ______

Soc Sci ______

Grades ______

Writing ______

Cl Mates ______

Science ______

Teachers ______

School ______

Total ______

School ______________________________ **Name** ______________________________

INVENTORY I SD08

On the following pages you are asked to answer questions which will help improve the program in your schools. Read the directions for each part carefully and answer the questions as accurately as you can. Your parents, teachers, and principal will not read your answers.

Most of the questions can be answered by circling the number in front of the statement which is correct for you.

EXAMPLE: What is your age?
1. 12
[✓ 2.] 13
3. 14
4. 15 (By circling the 2. you indicate that you are 13 years old.)

A few questions ask that you write in something. Answer as clearly as you can.

a. How do you like eighth grade compared to the lower grades?
1. better than the lower grades.
2. the same as the lower grades.
3. not as good as the lower grades.

b. Do you think high school will be
1. better than eighth grade?
2. the same as eighth grade?
3. not as good as eighth grade?

c. Please indicate what kind of student you are. I happen to be a student who
1. gets "D's" and "F's" no matter how hard I study.
2. must study somewhat hard to pass, but can get "C's" if I really work.
3. doesn't really study to pass, but can get "C's" and some "B's" if I really work.
4. can get "C's" and "B's" without studying, and "A's" if I really work hard.
5. can get "B's" easily and with a little work, mostly "A's."
6. always have been able to get "A's" and some "B's" without working very hard.

d. If you received at most a "B" average during the ninth grade, would you feel
1. very satisfied
2. satisfied
3. just so so
4. unsatisfied
5. very unsatisfied

e. If you received at most a "C" average during the ninth grade, would you feel
1. very satisfied
2. satisfied
3. just so so
4. unsatisfied
5. very unsatisfied

f. If you received at most a "D" average during the ninth grade, would you feel
1. very satisfied
2. satisfied
3. just so so
4. unsatisfied
5. very unsatisfied

g. What school subject do you like best? (Circle only one)
1. English (reading, composition, etc.)
2. social studies (geography, history, etc.)
3. mathematics (or arithmetic)
4. science
5. health
6. physical education
7. music
8. art
9. home economics or shop

h. What school subject do you like the least? (Circle only one)
1. English
2. social studies
3. mathematics
4. science
5. health
6. physical education
7. music
8. art
9. home economics or shop

i. Have you ever repeated any grades in school?
1. no
2. yes
If yes: circle the grades repeated.
1 2 3 4 5 6 7 8

j. Have you ever skipped any grades in school?
1. no
2. yes
If yes: circle the grades skipped.
1 2 3 4 5 6 7 8

k. How many summers have you earned money by working?
1. none
2. one
3. two
4. three
5. If more, write in: ________

l. How many hours a week do you work? (not counting summers)
1. none
2. 0 - 2
3. 3 - 5
4. 6 - 8
5. 9 - 11
6. 12 - 14
7. 15 or more

If you work, what do you do?

____

m. Do you plan to go to college?
1. no
2. yes
3. undecided

n. What kind of work do you plan to go into when you finish your schooling?

____

o. How sure are you of your answer in the above question?
1. very sure
2. somewhat sure
3. just so so
4. somewhat unsure
5. very unsure

p. What is your father's occupation? What does he do? Be as specific as you can.

____

q. In what place, business, or organization does he work?

____

r. Does your mother have a job outside the home?
1. no
2. yes
   If yes: What is her occupation? What does she do? Be as specific as you can.

   ____

s. How much formal education did your father have?
1. none
2. some elementary school
3. finished elementary school
4. some high school
5. finished high school
6. some college
7. finished college
8. attended graduate school or professional school after college
9. don't know

t. How much formal education did your mother have?
1. none
2. some elementary school
3. finished elementary school
4. some high school
5. finished high school
6. some college
7. finished college
8. attended graduate school or professional school after college
9. don't know

u. Which parents are living?
1. both
2. only mother
3. only father
4. neither

v. Are your parents separated?
1. no
2. yes: less than 1 year
3. yes: 1 - 2 years
4. yes: 3 - 5 years
5. yes: more than 5 years

w. Do you live with your
1. mother and father?
2. mother and stepfather?
3. father and stepmother?
4. mother?
5. father?
6. other? (write in: ______________________)

x. How many brothers and sisters do you have that are

older than you? 0 1 2 3 4 5 6 7 8

younger than you? 0 1 2 3 4 5 6 7 8

y. List all schools you have previously attended.

1. ____________________________________
2. ____________________________________
3. ____________________________________
4. ____________________________________
5. ____________________________________

ACTIVITIES

Circle the number in front of each statement which most accurately describes the extent of your present and/or past participation in that activity. You may circle more than one number under each activity.

DRAMATICS: I have
1. not participated.
2. attended one or more school plays.
3. been on the stage crew of a school play.
4. had a part in one or more school plays.

MUSIC: I have
1. not participated.
2. attended one or more music programs.
3. been a member of a school music group.
4. been an officer of a music group.

ART: I have
1. not participated.
2. made a poster for some school event.
3. had a picture or drawing placed on the bulletin board.
4. entered a picture or drawing in a contest.

SCIENCE: I have
1. not participated.
2. visited the science fair.
3. had a science project placed on school display.
4. made a special science project for the science fair.

FLAG FOOTBALL: I have
1. not participated.
2. attended one or more school football games.
3. been a manager for the team.
4. played on the team.
5. been captain or co-captain of the team.

BASKETBALL: I have
1. not participated.
2. attended one or more school basketball games.
3. been a manager for the team.
4. played on the team.
5. been captain or co-captain of the team.

TRACK: I have
1. not participated.
2. attended one or more school track meets.
3. been a manager for the team.
4. been on the team.
5. been a captain or co-captain of the team.

BASEBALL OR SOFTBALL: I have
1. not participated.
2. attended one or more school baseball games.
3. been a manager for the team.
4. played on the team.
5. been a captain or co-captain of the team.

Other sports, if any (write in: ____________________;

____)
(describe extent of participation)

CLASS OFFICE: I have
1. not participated.
2. been a campaign manager.
3. been nominated for a class office but not elected.
4. been elected to a class office.

STUDENT BODY OFFICE: I have
1. not participated.
2. been on a campaign committee.
3. been a campaign manager.
4. been nominated for a student body office but not elected.
5. been elected to a student body office.

SCHOOL CLUBS: I have
1. not participated.
2. been a member of at least one club.
3. been a member of more than one club.
4. been elected to an office of a club.

PEP ACTIVITY: I have
1. not participated.
2. been a pep squad member.
3. been a song leader.
4. been a yell leader.

SOCIAL ACTIVITY: I have
1. not participated.
2. attended at least one school dance.
3. attended more than one school dance.
4. been on a dance or social committee.
5. been chairman of a dance or social committee.

SERVICE ACTIVITY: I have
1. not participated.
2. been a member of the school traffic squad.
3. been a member of the school fire squad.
4. been an office assistant.
5. been a library assistant.

Others. If you have taken part in some school activity not included above please describe the activity and the extent of your participation.

____

____

____

(Go on to next page)

School ______________________________ Name ______________________________

INVENTORY 2 SDO 8

This scale is a new method of measuring what words mean to people. There are no right or wrong answers, so simply indicate your first impressions or feelings about each word.

At the bottom of the page is a completed example of what you will be asked to do. Please refer to it as you read these instructions.

There are seven blanks separating each word pair. The position of each blank can be described by the following terms:

Very	Quite	Slightly	Neutral	Slightly	Quite	Very
___	___	___	___	___	___	___

For example, the seven blanks separating the first word pair "Good-Bad" would be read:

	Very Good	Quite Good	Slightly Good	Neutral	Slightly Bad	Quite Bad	Very Bad	
Good	___	___	___	___	___	___	___	Bad

The seven blanks separating the next word pair "Unsociable-Sociable" would be read:

	Very Unsociable	Quite Unsociable	Slightly Unsociable	Neutral	Slightly Sociable	Quite Sociable	Very Sociable	
Unsociable	___	___	___	___	___	___	___	Sociable

Look at the example at the bottom left hand side of the page. The word to be described is HOSPITAL. This is not any particular hospital. Whatever HOSPITAL means to you is what you are to think.

Now let me explain how I described HOSPITAL. Look at the first word pair "Good - Bad." The idea of HOSPITAL was very good to me so I placed an X in the blank closest to "Good." Look at the other word pairs in the example.

Make each item a separate decision. Be sure and put your X on the line provided. Check only one blank for each word pair.

Look over the example again to be sure you understand, then go on to the rest of the scale, starting at the bottom right hand side of this page.

EXAMPLE

Describe: HOSPITAL

Good	X	___	___	___	___	___	___	Bad
Unsociable	___	___	___	___	___	X	___	Sociable
Kind	X	___	___	___	___	___	___	Cruel
Beautiful	___	___	X	___	___	___	___	Ugly
Successful	X	___	___	___	___	___	___	Unsuccessful
Meaningful	X	___	___	___	___	___	___	Meaningless
Negative	___	___	___	___	___	___	X	Positive
Boring	___	___	___	___	X	___	___	Interesting
Fair	___	___	X	___	___	___	___	Unfair
Worthless	___	___	___	___	___	___	X	Valuable
Pleasant	___	___	___	___	___	___	X	Unpleasant
Harmful	___	___	___	___	___	___	X	Beneficial
Necessary	X	___	___	___	___	___	___	Unnecessary

START HERE:

Describe: TESTS

Good	___	___	___	___	___	___	___	Bad
Unsociable	___	___	___	___	___	___	___	Sociable
Kind	___	___	___	___	___	___	___	Cruel
Beautiful	___	___	___	___	___	___	___	Ugly
Successful	___	___	___	___	___	___	___	Unsuccessful
Meaningful	___	___	___	___	___	___	___	Meaningless
Negative	___	___	___	___	___	___	___	Positive
Boring	___	___	___	___	___	___	___	Interesting
Fair	___	___	___	___	___	___	___	Unfair
Worthless	___	___	___	___	___	___	___	Valuable
Pleasant	___	___	___	___	___	___	___	Unpleasant
Harmful	___	___	___	___	___	___	___	Beneficial
Necessary	___	___	___	___	___	___	___	Unnecessary

Describe: MATHEMATICS

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: HOMEWORK

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: READING

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: ENGLISH

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: PHYSICAL EDUCATION

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: SOCIAL STUDIES

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: GRADES

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: WRITING

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: CLASSMATES

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: SCIENCE

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: TEACHERS

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

Describe: SCHOOL

Good ___ ___ ___ ___ ___ ___ ___ Bad
Unsociable ___ ___ ___ ___ ___ ___ ___ Sociable
Kind ___ ___ ___ ___ ___ ___ ___ Cruel
Beautiful ___ ___ ___ ___ ___ ___ ___ Ugly
Successful ___ ___ ___ ___ ___ ___ ___ Unsuccessful
Meaningful ___ ___ ___ ___ ___ ___ ___ Meaningless
Negative ___ ___ ___ ___ ___ ___ ___ Positive
Boring ___ ___ ___ ___ ___ ___ ___ Interesting
Fair ___ ___ ___ ___ ___ ___ ___ Unfair
Worthless ___ ___ ___ ___ ___ ___ ___ Valuable
Pleasant ___ ___ ___ ___ ___ ___ ___ Unpleasant
Harmful ___ ___ ___ ___ ___ ___ ___ Beneficial
Necessary ___ ___ ___ ___ ___ ___ ___ Unnecessary

NAME____________________ **SEX**___ **BIRTHDATE**__________ **GRADE 4, SCHOOL**__________________
last first middle month day year

HEALTH PROBLEM--yes___ **no**___ **Explain**__________ **Year**____ **Code**___ **BIRTHPLACE**__________________

PERSONAL INFORMATION Date of Information________ Number of residences listed___

Parents: LW		Occupation	Code
F	___	______________	___
SF	___	______________	___
M	___	______________	___
SM	___	______________	___

Agency Aid ______________

No. Older Children___

No. Younger Child.___

Total in family ___

HOME BROKEN:

By death___
By separation
___

Date______

SCHOOLS ATTENDED

Spokane___

Other_____

Total_____

	DAYS ABSENT	TARDY	GRADES REPEATED
1	___	___	___
2	___	___	___
3	___	___	___
4	___	___	___

SPECIAL REMEDIAL HELP

Type	Year
__________	___
__________	___

ACADEMIC ACHIEVEMENT: Grade 4

Language

1 ___
2 ___
3 ___
4 ___
5 ___
6 ___
7 ___
8 ___
9 ___
10 ___
Social St.
11 ___
12 ___
13 ___
14 ___
Arith.
15 ___
16 ___
Science
17 ___
18 ___

Music

19 ___
20 ___
21 ___
Art
22 ___
23 ___
24 ___
P. E.
25 ___
26 ___
Health
27 ___
28 ___
Pers. Gro.
29 ___
30 ___
31 ___
32 ___
33 ___
34 ___
35 ___
36 ___

Experimental Reading

C ___
P ___
English
C ___
P ___
Spelling
C ___
P ___
Writing
C ___
P ___
Social
C ___
P ___
Arith.
C ___
P ___
Science
C ___
P ___
Health
C ___
P ___

Pers. Gro.

1 ___
2 ___
3 ___
4 ___
5 ___
6 ___
7 ___
Study
8 ___
9 ___
10 ___
11 ___
12 ___
Special
13 ___
14 ___
15 ___
16 ___
17 ___

LORGE-THORNDIKE:

Verbal_____ Non-verbal_____ Total_____

STANFORD ACHIEVEMENT TEST: Gr. 3

1 ___
2 ___
3 ___
4 ___
5 ___
6 ___
7 ___
8 ___
9 ___
10 ___

METROPOL. ACHIEVEMENT TEST: Gr. 4

1 ___
2 ___
3 ___
4 ___
5 ___
6 ___
7 ___
8 ___
9 ___

GROWTH SUMMARY

Academic	Personal
Grade 4	
1 __________	1 yes___ no___
2 sat.___ Finds___	2 yes___ no___
3 __________	3 yes___ no___
4 __________	4 __________
5 __________	5 __________
Grade 3	
1 __________	1 yes___ no___
2 sat.___ Finds___	2 yes___ no___
3 __________	3 yes___ no___
4 __________	4 __________
5 __________	5 __________
Grade 2	
1 __________	1 yes___ no___
2 sat.___ Finds___	2 yes___ no___
3 __________	3 yes___ no___
4 __________	4 __________
5 __________	5 __________
Grade 1	
1 __________	1 yes___ no___
2 sat.___ Finds___	2 yes___ no___
3 __________	3 yes___ no___
4 __________	4 __________
5 __________	5 __________

APPENDIX B

TABLES

TABLE 1

CORRELATIONS BETWEEN FIFTY-ONE VARIABLES FOR

SENIOR CLASS MAL. N = 1539

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51
DAT Verbal	1	1.00
DAT Number	2	.60	1.00
DAT Abstract	3	.55	.59	1.00
DAT Space Rel.	4	.46	.47	.56	1.00
DAT Mech.	5	.47	.42	.52	.54	1.00
SCAT Verbal	6	.70	.49	.44	.35	.38	1.00
SCAT Non-Verbal	7	.56	.71	.58	.45	.38	.95	1.00
SCAT Total	8	.73	.67	.57	.46	.43	.88	.83	1.00
Av. Days Absent	9	-.03	-.08	-.05	-.04	-.05	-.04	-.13	-.09	1.00
Total Gr. Pts.	10	.52	.54	.40	.32	.34	.50	.50	.57	-.21	1.00
English GPA	11	.54	.57	.40	.39	.31	.54	.50	.60	-.15	.81	1.00
Soc. Sci. GPA	12	.56	.55	.40	.38	.28	.57	.51	.62	-.17	.80	.81	1.00
Math. GPA	13	.43	.52	.42	.36	.31	.37	.52	.49	-.18	.72	.64	.63	1.00
For. Lang. GPA	14	.39	.48	.27	.22	.25	.34	.37	.41	-.15	.73	.72	.69	.67	1.00
Nat. Sci. GPA	15	.52	.51	.41	.31	.31	.48	.49	.55	-.15	.71	.71	.72	.64	.67	1.00
Total Acad. GPA	16	.55	.60	.42	.31	.31	.54	.54	.62	-.18	.84	.87	.86	.73	.80	.79	1.00
Other GPA	17	.30	.31	.25	.21	.24	.25	.32	.31	-.09	.35	.39	.30	.24	.25	.30	.29	1.00
Hrs. Work/Week	18	-.07	-.08	-.08	-.02	-.04	-.09	-.08	-.07	.00	-.12	-.13	-.13	-.11	-.18	-.12	-.24	-.03	1.00
Own a Car	19	-.13	-.11	-.10	-.06	-.06	-.17	-.08	-.13	-.03	-.27	-.32	-.26	-.22	-.21	-.23	-.29	-.07	.30	1.00
Father's Occ.	20	.20	.21	.16	.09	.16	.25	.17	.24	-.04	.27	.24	.26	.16	.11	.20	.24	.15	-.06	-.11	1.00
Mother's Occ.	21	.15	.16	.15	.07	.14	.21	.19	.23	-.03	.15	.23	.21	.13	.20	.17	.21	.16	-.05	-.06	.37	1.00
Father's Educ.	22	.06	.10	.11	.07	.09	.16	.09	.14	-.04	.13	.13	.14	.10	.11	.14	.13	.07	-.06	-.04	.42	.20	1.00
Mother's Educ.	23	.09	.10	.08	.05	.07	.13	.11	.13	-.04	.07	.11	.13	.04	.02	.10	.09	.08	-.03	-.03	.28	.38	.33	1.00
Tot. No. Child.	24	-.09	-.08	-.04	.02	-.04	-.10	-.04	-.08	.07	-.11	-.12	-.14	-.05	-.04	-.10	-.12	-.09	-.05	-.03	-.09	-.22	-.06	-.14	1.00
Repeated Grades	25	-.24	-.26	-.16	-.15	-.10	-.24	-.21	-.26	-.01	-.27	-.24	-.24	-.13	-.14	-.20	-.23	-.13	-.04	.10	-.08	-.04	-.02	-.06	.05	1.00
Failed Classes	26	-.24	-.28	-.19	-.12	-.12	-.24	-.25	-.28	.15	-.49	-.50	-.48	-.40	-.44	-.44	-.52	-.13	-.07	.22	-.12	-.03	-.07	-.05	.04	.16	1.00
No. Sch. Attend.	27	.06	-.10	.04	.03	.04	.04	.02	.04	.09	-.06	-.05	-.06	-.04	-.06	-.07	-.06	-.01	-.01	.00	-.05	-.04	-.02	-.04	.07	.05	.11	1.00
Fine Arts Act.	28	.02	-.04	-.01	.02	.06	.04	-.06	.00	.02	.13	.08	.06	.03	.04	.02	.04	.12	.01	-.08	.02	.07	.02	.04	.00	-.03	.01	.12	1.00
H.S. Club Act.	29	.34	.33	.26	.24	.25	.33	.29	.36	-.01	.52	.54	.50	.40	.45	.44	.52	.22	-.13	-.29	.15	.10	.08	.10	-.08	-.16	-.29	-.04	.19	1.00
Intramural Act.	30	-.17	-.10	-.09	-.08	-.09	-.15	-.13	-.16	.01	-.15	-.13	-.15	-.11	-.18	-.15	-.16	-.02	.10	.05	-.10	-.12	-.04	-.03	.06	.00	.05	.11	.18	.00	1.00
Intersch. Act.	31	-.11	-.04	-.05	-.02	-.02	-.09	-.06	-.09	.00	-.06	-.06	-.04	-.05	-.13	-.06	-.08	.00	.06	.06	-.02	-.10	-.06	-.01	.04	.00	.05	.08	.17	.06	.44	1.00
Stud. Gvt. Act.	32	.27	.21	.16	.11	.10	.20	.21	.23	-.04	.36	.36	.34	.27	.26	.30	.34	.17	-.01	-.07	.19	.10	.12	.09	-.07	-.12	-.18	-.04	.18	.44	.11	.22	1.00
Committee Act.	33	.14	.18	.13	.10	.12	.15	.11	.14	.00	.29	.34	.29	.18	.23	.25	.28	.17	-.03	-.17	.15	.08	.09	.09	-.06	-.14	-.16	-.04	.25	.44	.13	.17	.46	1.00
Att. Tests	34	.12	.14	.11	.06	.03	.13	.12	.16	-.05	.20	.19	.20	.16	.17	.19	.20	.07	-.06	-.10	.01	.00	.02	.04	.03	-.04	-.10	-.03	-.02	.15	.01	.05	.12	.06	1.00
Att. Math.	35	.16	.29	.18	.23	.18	.10	.37	.25	-.07	.17	.09	.11	.31	.13	.16	.17	.10	.03	.01	.02	.00	-.02	.08	.04	.00	-.06	.04	.00	.06	.00	.05	.06	-.01	.30	1.00
Att. Homework	36	.02	.02	-.01	.02	-.01	.06	.00	.05	-.03	.17	.19	.17	.07	.15	.15	.17	.03	-.05	-.15	.02	.02	.04	.05	.00	-.05	-.14	-.03	.08	.17	.02	.05	.12	.14	.56	.15	1.00
Att. Reading	37	.24	.12	.12	.10	.14	.30	.07	.22	.02	.19	.26	.22	.11	.13	.19	.23	.07	-.06	-.19	.11	.02	.02	.09	-.03	-.14	-.16	.05	.11	.22	.00	.02	.13	.17	.34	.16	.34	1.00
Att. English	38	.16	.17	.12	.05	.08	.19	.09	.17	.00	.29	.36	.28	.19	.22	.23	.30	.10	-.07	-.24	.12	.04	.07	.10	-.01	-.11	-.21	-.03	.14	.28	.02	-.01	.19	.24	.37	.16	.41	.50	1.00
Att. Phy. Educ.	39	-.08	-.05	-.03	.01	-.04	-.11	-.03	-.06	-.08	-.16	-.14	-.08	.07	-.11	-.06	-.12	-.01	.07	.12	-.06	-.08	-.01	-.03	.04	.02	.06	.03	.00	-.06	.20	.24	.06	.00	.15	.17	.13	.04	.01	1.00
Att. Soc. Stud.	40	.12	.05	.05	.03	.02	.17	.05	.14	.00	.14	.16	.23	.04	.03	.12	.16	.06	-.04	-.07	.09	.01	.05	.08	-.02	-.03	-.09	-.02	.02	.13	.00	-.01	.13	.10	.44	.16	.43	.39	.32	.13	1.00
Att. Grades	41	.09	.16	.06	.07	.02	.06	.10	.10	-.08	.24	.23	.23	.22	.23	.21	.24	.08	-.04	-.11	-.03	-.02	-.01	-.02	.01	-.07	-.21	-.07	.04	.20	.04	.06	.17	.12	.54	.25	.47	.26	.40	.13	.78	1.00
Att. Writing	42	.07	.04	.03	.03	.03	.08	-.02	.03	.04	.10	.16	.12	.06	.07	.12	.13	.04	-.06	-.19	.09	.01	.02	.06	.01	-.05	-.15	.00	.14	.19	.08	.01	.10	.17	.27	.14	.30	.49	.50	.09	.31	.77	1.00
Att. Classmates	43	.05	.11	.09	.10	.08	.08	.08	.09	-.05	.14	.14	.15	.07	.05	.11	.13	.11	-.07	-.09	.03	-.03	.03	.06	-.04	-.10	-.09	-.04	.03	.19	.06	.04	.18	.14	.27	.11	.27	.27	.34	.19	.24	.27	.34	1.00
Att. Science	44	.17	.15	.12	.18	.19	.14	.15	.16	-.02	.10	.07	.12	.10	.04	.21	.11	.09	.00	-.02	.09	.03	.05	.07	-.04	-.07	-.04	.01	.06	.08	.04	.05	.07	.08	.28	.48	.21	.30	.24	.21	.27	.23	.28	.15	1.00
Att. Teachers	45	.13	.12	.12	.07	.08	.13	.11	.15	.00	.27	.26	.24	.20	.22	.22	.25	.09	-.09	-.19	.03	.02	.03	.03	.01	-.05	-.16	-.03	.06	.23	-.01	-.03	.12	.13	.46	.21	.47	.35	.46	.07	.42	.44	.37	.40	.20	1.00
Att. School	46	.14	.14	.13	.14	.10	.12	.13	.15	-.10	.20	.24	.24	.14	.15	.21	.22	.15	-.07	-.14	.08	.05	.04	.06	-.02	-.09	-.17	-.01	.09	.27	.06	.04	.21	.19	.42	.24	.49	.42	.44	.22	.43	.45	.42	.51	.30	.60	1.00
Total Attitude	47	.17	.18	.14	.12	.12	.18	.16	.20	-.05	.26	.27	.28	.20	.19	.26	.27	.12	-.05	-.16	.08	.01	.04	.08	.00	-.09	-.18	-.02	.09	.26	.06	.08	.20	.19	.66	.46	.67	.61	.65	.35	.62	.64	.60	.54	.54	.68	.75	1.00
Prob. PYR	48	-.06	-.10	-.06	-.09	-.10	-.06	-.08	-.08	.02	-.11	-.12	-.11	-.13	-.11	-.12	-.13	-.03	-.01	.08	-.09	-.12	-.04	-.07	.03	-.01	.10	.04	.03	-.10	.08	.04	.01	-.02	-.08	-.04	-.07	-.03	-.07	.03	-.03	-.08	-.03	-.04	-.06	-.08	-.05	-.08	1.00
Prob. ASW	49	-.18	-.12	-.07	-.06	-.04	-.20	-.15	-.20	.05	-.24	-.25	-.25	-.21	-.20	-.24	-.26	-.10	.04	.10	-.07	-.06	.00	-.02	.01	.09	.19	.03	-.04	-.13	.02	.01	-.06	-.07	-.21	-.08	-.13	-.14	-.18	.01	-.14	-.21	-.13	-.08	-.09	-.16	-.12	-.20	.38	1.00
Prob. CTP	50	-.02	-.08	-.07	-.08	-.10	-.03	-.06	-.05	.05	-.10	-.08	-.09	-.10	-.10	-.10	-.10	-.05	.03	.06	-.03	-.03	.00	.04	.02	-.05	.08	.04	.07	-.04	.06	.04	.00	.01	-.17	-.09	-.17	-.01	-.13	-.07	-.12	-.18	-.08	-.12	-.08	-.27	-.16	-.21	.35	.32	1.00
Prob Total	51	-.14	-.15	-.09	-.10	-.10	-.15	-.14	-.16	.07	-.22	-.22	-.22	-.20	-.20	-.22	-.23	-.08	.08	.10	-.07	-.12	-.01	-.02	.04	.02	.18	.04	.04	-.12	.10	.06	-.01	-.02	-.23	-.10	-.17	-.11	-.17	-.01	-.14	-.21	-.11	-.09	-.11	-.22	-.15	-.23	.74	.78	.71	1.00

For N = 1225, r = .07 significant at .01 level

TABLE 2

INTERCORRELATIONS AMONG FIFTY-FOUR MEASURES FOR EIGHTH GRADE PUPILS

Variables		Stanford Achievement Test						Metropolitan Achievement Test									SCAT		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Reading Par. Mean.	1	1.00																	
Read. Word Mean.	2	.73	1.00																
Lang. Usage	3	.68	.71	1.00															
Arith. Reas.	4	.69	.69	.66	1.00														
Arith. Comp.	5	.52	.51	.55	.72	1.00													
Battery Median	6	.83	.87	.85	.84	.69	1.00												
Word Knowledge	7	.69	.74	.66	.61	.45	.78	1.00											
Read. Comp.	8	.70	.71	.64	.66	.49	.75	.81	1.00										
Language	9	.62	.62	.68	.61	.53	.72	.67	.67	1.00									
Lang. St. Skills	10	.60	.58	.58	.58	.50	.65	.64	.67	.67	1.00								
Arith. Comp.	11	.56	.54	.57	.65	.60	.64	.58	.64	.65	.61	1.00							
Arith Prob. Solv.	12	.59	.57	.58	.69	.59	.68	.62	.67	.67	.64	.82	1.00						
Soc. Stud. Inf.	13	.58	.61	.51	.57	.42	.63	.73	.75	.57	.59	.52	.62	1.00					
Soc. St. St. Skills	14	.57	.53	.51	.61	.48	.60	.61	.66	.58	.63	.64	.68	.63	1.00				
Science	15	.61	.59	.52	.58	.42	.63	.72	.74	.57	.63	.58	.64	.71	.68	1.00			
Verbal	16	.74	.77	.68	.66	.49	.79	.86	.83	.66	.66	.61	.65	.72	.65	.74	1.00		
Quantitative	17	.62	.57	.59	.70	.64	.69	.61	.67	.64	.64	.76	.77	.58	.67	.61	.68	1.00	
Total	18	.73	.73	.68	.73	.59	.80	.80	.81	.70	.70	.74	.75	.70	.71	.74	.91	.87	1.00
Verbal	19	.68	.64	.62	.62	.46	.70	.72	.73	.64	.63	.59	.63	.63	.64	.66	.77	.65	.77
Numerical	20	.53	.50	.51	.63	.56	.61	.52	.57	.59	.56	.74	.75	.52	.61	.53	.56	.76	.69
Abstract	21	.47	.41	.47	.53	.43	.52	.46	.52	.48	.52	.55	.59	.42	.60	.50	.51	.60	.59
Space Relations	22	.39	.30	.36	.41	.33	.38	.39	.42	.37	.44	.46	.49	.35	.53	.47	.41	.50	.48
Mechanical	23	.32	.35	.23	.34	.22	.30	.33	.36	.22	.30	.34	.39	.33	.44	.47	.36	.37	.39
VR + NA	24	.69	.62	.63	.69	.56	.72	.68	.72	.68	.66	.74	.76	.64	.69	.65	.74	.78	.81
Total Solid Subj.	25	.53	.51	.54	.54	.47	.58	.54	.60	.61	.56	.63	.64	.53	.52	.49	.58	.62	.64
Total all Non-Solid	26	.19	.18	.18	.20	.12	.20	.17	.21	.20	.27	.24	.25	.24	.21	.19	.18	.18	.21
Absence 8th grade	27	-.05	-.03	-.03	-.07	-.08	-.08	-.09	-.11	-.11	-.10	-.15	-.14	-.13	-.15	-.11	-.09	-.11	-.11
Average all Absence	28	-.02	-.02	-.00	-.05	-.05	-.02	-.04	-.05	-.09	-.06	-.11	-.11	-.10	-.12	-.06	-.06	-.08	-.08
Self-Est. Achieve.	29	.52	.51	.52	.54	.47	.59	.55	.60	.57	.54	.60	.59	.53	.51	.50	.58	.60	.63
Hours Work/Week	30	-.11	-.07	-.11	-.06	-.07	-.10	-.08	-.09	-.09	-.10	-.08	-.08	-.08	-.07	-.05	-.09	-.06	-.07
Father's Occ.	31	.24	.25	.29	.26	.25	.29	.31	.28	.31	.25	.26	.26	.28	.25	.25	.29	.26	.30
Father's Educ.	32	.07	.04	.09	.06	.05	.07	.10	.05	.10	.06	.07	.05	.07	.09	.06	.07	.09	.08
No. Schools Att.	33	-.01	-.02	-.02	-.03	.02	-.02	.01	.01	-.02	-.01	-.02	-.02	-.00	-.02	-.02	-.01	-.03	-.02
Arts and Sci.	34	.20	.18	.19	.19	.15	.20	.16	.18	.21	.19	.19	.18	.14	.18	.16	.20	.17	.20
Sports	35	.08	.10	.02	.12	.09	.09	.06	.10	.03	.06	.15	.14	.11	.11	.08	.07	.08	.09
Student	36	.23	.27	.27	.26	.22	.28	.20	.21	.28	.23	.25	.23	.17	.17	.13	.24	.22	.25
Tests	37	.14	.14	.12	.15	.16	.16	.17	.19	.16	.17	.18	.18	.17	.16	.17	.15	.16	.17
Mathematics	38	.20	.13	.18	.27	.31	.23	.15	.21	.23	.23	.33	.33	.19	.28	.23	.16	.30	.25
Homework	39	.07	.08	.11	.08	.09	.11	.09	.08	.12	.08	.09	.10	.09	.10	.07	.10	.10	.12
Reading	40	.26	.29	.28	.23	.17	.30	.24	.33	.26	.25	.20	.24	.30	.24	.29	.33	.24	.31
English	41	.20	.20	.25	.19	.21	.26	.17	.18	.30	.20	.20	.19	.12	.14	.11	.18	.21	.21
P.E.	42	.01	.02	-.01	.04	-.00	.02	.02	.03	-.00	.00	.05	.07	.03	.03	.05	.01	.00	.02
Soc. Studies	43	.15	.16	.16	.14	.13	.17	.22	.24	.17	.18	.15	.16	.26	.18	.20	.19	.18	.20
Grades	44	.24	.23	.25	.25	.25	.27	.23	.27	.29	.27	.31	.31	.24	.26	.25	.25	.30	.29
Writing	45	.12	.11	.18	.12	.14	.16	.11	.10	.10	.12	.11	.11	.08	.10	.08	.10	.12	.12
Classmates	46	.16	.15	.19	.17	.16	.20	.13	.13	.20	.15	.17	.17	.13	.13	.08	.11	.16	.14
Science	47	.13	.08	.06	.09	.06	.09	.16	.16	.07	.12	.08	.12	.16	.19	.24	.15	.10	.13
Teachers	48	.16	.15	.19	.14	.15	.19	.16	.17	.20	.17	.16	.16	.12	.15	.12	.16	.16	.18
School	49	.22	.22	.24	.23	.23	.26	.25	.26	.31	.26	.26	.16	.23	.26	.23	.22	.24	.25
Total Attitude	50	.23	.22	.25	.24	.23	.27	.25	.27	.28	.25	.26	.27	.24	.25	.24	.24	.25	.27
School	51	-.28	-.30	-.29	-.28	-.25	-.32	-.30	-.33	-.32	-.31	-.29	-.30	-.30	-.27	-.28	-.30	-.30	-.32
Money, Work, Future	52	-.10	-.12	-.11	-.12	-.11	-.11	-.10	-.11	-.11	-.14	-.12	-.12	-.11	-.10	-.11	-.11	-.14	-.13
People in General	53	-.14	-.16	-.16	-.17	-.16	-.17	-.12	-.14	-.17	-.18	-.18	-.18	-.15	-.14	-.13	-.13	-.16	-.15
Total Prob.	54	-.21	-.23	-.21	-.23	-.21	-.24	-.20	-.23	-.23	-.25	-.24	-.25	-.23	-.20	-.21	-.22	-.25	-.25

Variables		DAT						GPA		Absence		Questionnaire					Activities		
		19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Verbal	19	1.00																	
Numerical	20	.62	1.00																
Abstract	21	.58	.59	1.00															
Space Relations	22	.52	.50	.61	1.00														
Mechanical	23	.41	.37	.48	.54	1.00													
VR + NA	24	.90	.89	.64	.56	.43	1.00												
Total Solid Subj.	25	.58	.61	.44	.35	.31	.64	1.00											
Total all Non-Solid	26	.19	.23	.21	.16	.09	.23	.39	1.00										
Absence 8th grade	27	-.11	-.14	-.07	-.09	-.11	-.14	-.23	-.12	1.00									
Average all Absence	28	-.07	-.10	-.06	-.05	-.07	-.10	-.17	-.07	.73	1.00								
Self-Est. Achieve.	29	.56	.58	.44	.36	.34	.63	.74	.34	-.16	-.09	1.00							
Hours Work/Week	30	-.09	-.08	-.03	-.08	.06	-.06	-.09	.08	.04	.08	-.06	1.00						
Father's Occ.	31	.25	.25	.29	.16	.14	.28	.24	.08	-.06	-.09	.25	-.05	1.00					
Father's Educ.	32	.02	.07	.03	.07	.06	.06	.07	-.04	-.01	.00	.04	-.05	.26	1.00				
No. Schools Att.	33	.00	-.00	.04	.02	-.02	.00	-.06	-.03	.09	.04	-.06	.03	-.01	-.01	1.00			
Arts and Sci.	34	.16	.14	.18	.14	.09	.16	.24	.26	-.04	-.03	.26	.06	.12	-.01	.01	1.00		
Sports	35	.05	.11	.09	.03	.13	.08	.11	.16	-.10	-.11	.17	.11	.06	-.04	.02	.31	1.00	
Student	36	.18	.20	.17	.08	-.04	.21	.34	.31	-.05	-.06	.35	.03	.15	.08	.02	.50	.34	1.00
Tests	37	.15	.16	.13	.14	.08	.17	.20	.17	-.02	.01	.14	.02	.05	.00	-.00	.10	.09	.12
Mathematics	38	.23	.32	.26	.26	.23	.30	.27	.19	-.06	-.04	.30	.03	.08	.07	-.09	.15	.15	.17
Homework	39	.06	.08	.05	.06	-.03	.07	.14	.14	-.02	-.00	.16	.01	.07	.08	-.03	.09	.06	.15
Reading	40	.27	.18	.20	.13	.08	.24	.28	.34	-.09	-.01	.25	-.01	.20	.02	.03	.13	.01	.16
English	41	.17	.19	.12	.09	-.07	.20	.26	.13	-.01	-.00	.28	-.02	.09	.05	-.04	.14	.04	.20
P.E.	42	-.01	.02	.04	.03	.09	-.00	.01	.13	-.07	-.08	.04	.05	-.02	-.03	-.01	.04	.32	.08
Soc. Studies	43	.18	.12	.11	.11	.07	.17	.23	.11	-.07	-.03	.27	-.01	.10	.04	-.03	.12	.09	.15
Grades	44	.23	.28	.21	.19	.11	.29	.40	.34	-.06	.00	.41	-.01	.10	-.00	-.04	.19	.10	.22
Writing	45	.08	.10	.08	.04	-.07	.09	.14	.08	.03	.01	.16	-.00	.08	.02	-.00	.15	.05	.22
Classmates	46	.13	.15	.12	.08	.00	.15	.19	.12	-.07	-.06	.19	.01	.12	.02	-.01	.12	.13	.21
Science	47	.14	.08	.11	.14	.00	.12	.13	.15	-.05	-.01	.18	.04	.02	.03	-.01	.15	.13	.11
Teachers	48	.16	.16	.15	.15	.06	.18	.23	.17	-.02	.02	.14	-.00	.07	.01	-.00	.10	.08	.16
School	49	.26	.27	.22	.20	.09	.25	.29	.17	-.09	-.04	.32	-.00	.14	.02	-.01	.19	.09	.24
Total Attitude	50	.23	.24	.20	.18	.10	.25	.31	.27	-.04	-.03	.34	.01	.12	.04	-.03	.19	.25	.25
School	51	-.32	-.28	-.30	-.18	-.12	-.33	-.40	-.16	.08	.02	-.43	.07	-.16	-.06	.07	-.14	-.05	-.17
Money, Work, Future	52	-.13	-.11	-.09	-.08	-.01	-.13	-.15	-.04	.03	.01	-.15	.05	-.12	-.03	.07	.00	.05	-.03
People in General	53	-.15	-.14	-.09	-.11	-.08	-.16	-.17	-.06	.04	.03	-.19	.07	-.15	.03	.08	-.05	-.09	-.08
Total Prob.	54	-.24	-.21	-.25	-.14	-.10	-.25	-.30	-.08	.06	.08	-.32	.08	-.18	-.03	.08	-.07	-.05	-.10

Variables		Attitudes														Problems			
		37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
Tests	37	1.00																	
Mathematics	38	.47	1.00																
Homework	39	.59	.42	1.00															
Reading	40	.35	.33	.33	1.00														
English	41	.45	.40	.51	.40	1.00													
P.E.	42	.26	.27	.19	.18	.16	1.00												
Soc. Studies	43	.48	.38	.52	.47	.40	.19	1.00											
Grades	44	.55	.49	.52	.36	.51	.22	.44	1.00										
Writing	45	.32	.32	.38	.41	.53	.20	.41	.39	1.00									
Classmates	46	.27	.29	.27	.29	.33	.31	.33	.33	.34	1.00								
Science	47	.41	.45	.38	.33	.37	.29	.38	.39	.29	.18	1.00							
Teachers	48	.51	.45	.54	.38	.56	.23	.52	.56	.41	.32	.37	1.00						
School	49	.51	.49	.54	.47	.57	.24	.54	.58	.45	.42	.42	.69	1.00					
Total Attitude	50	.70	.66	.72	.60	.71	.44	.71	.73	.62	.54	.60	.77	.80	1.00				
School	51	-.38	-.29	-.36	-.27	-.34	-.09	-.35	-.45	-.22	-.20	-.26	-.39	-.43	-.46	1.00			
Money, Work, Future	52	-.12	-.08	-.11	-.10	-.13	-.00	-.11	-.16	-.04	-.11	-.05	-.15	-.15	-.15	.49	1.00		
People in General	53	-.18	-.16	-.14	-.12	-.18	-.10	-.17	-.21	-.11	-.26	-.10	-.16	-.22	-.24	.53	.52	1.00	
Total Prob.	54	-.37	-.22	-.25	-.19	-.25	-.09	-.25	-.33	-.14	-.22	-.18	-.28	-.32	-.34	.82	.80	.84	1.00

r = .06 significant at .01 level

TABLE 3

INTERCORRELATIONS OF FORTY-ONE VARIABLES FOR FOURTH GRADE PUPILS

Variables		Home Characteristics									Absence		Report Card--Achievement and Personal Growth											LT	SAT	Metropolitan Achievement Test							Academic Growth					Personal Growth				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
No. Local Residences	1	1.00																																								
Father's Occupation	2	-.12	1.00																																							
Mother's Occupation	3	-.05	.37	1.00																																						
Siblings, Older	4	.01	-.05	-.10	1.00																																					
Siblings, Younger	5	.18	-.01	-.07	-.17	1.00																																				
Total Siblings	6	.13	-.05	-.14	.69	.59	1.00																																			
Local Schs. Attend.	7	.72	-.11	-.08	-.01	.17	.12	1.00																																		
Other Sch.'s Attend.	8	.13	-.07	-.01	-.04	.10	.04	.03	1.00																																	
Total Schools Attended	9	.59	-.11	-.07	-.04	.18	.10	.78	.64	1.00																																
Absence, Fourth Gr.	10	.04	-.02	-.05	.06	.00	.06	.03	.03	.06	1.00																															
Average Absence	11	.03	-.01	-.11	.06	-.01	.04	.03	-.01	.05	.82	1.00																														
Grades Repeated	12	.11	-.05	-.00	.01	.07	.06	.13	.01	.10	-.01	.03	1.00																													
Reading	13	-.10	.15	.25	-.09	-.07	-.13	-.12	-.05	-.10	-.06	-.06	-.22	1.00																												
English	14	-.11	.17	.20	-.08	-.08	-.13	-.13	-.06	-.13	-.06	-.06	-.21	.67	1.00																											
Spelling	15	-.09	.16	.20	-.10	-.03	-.11	-.12	-.05	-.11	-.05	-.06	-.22	.64	.65	1.00																										
Social Studies	16	-.12	.16	.22	-.08	-.08	-.13	-.14	-.02	-.10	-.05	-.04	-.20	.65	.64	.56	1.00																									
Arithmetic	17	-.12	.14	.28	-.09	-.07	-.12	-.14	-.05	-.13	-.06	-.06	-.19	.60	.59	.62	.62	1.00																								
Science	18	-.11	.16	.19	-.07	-.05	-.09	-.11	-.03	-.09	-.00	-.00	-.14	.48	.50	.42	.57	.49	1.00																							
Music, Art	19	-.06	.06	.08	-.03	-.04	-.06	-.08	.00	-.06	-.00	.00	-.11	.32	.35	.30	.36	.27	.30	1.00																						
Physical Education	20	-.03	.04	.03	.00	-.03	-.02	-.06	-.05	-.06	-.06	-.03	-.05	.19	.22	.19	.22	.22	.16	.22	1.00																					
Health	21	-.10	.08	.05	-.07	-.08	-.12	-.13	-.06	-.12	.00	.01	-.08	.33	.37	.34	.37	.31	.30	.30	.33	1.00																				
Personal Growth	22	-.12	.10	.22	-.06	-.06	-.10	-.14	-.04	-.12	-.02	-.02	-.18	.51	.55	.47	.56	.52	.40	.39	.38	.49	1.00																			
Lorge-Thorndike	23	-.11	.23	.29	-.11	-.06	-.13	-.13	-.06	-.12	-.02	-.03	-.26	.56	.48	.49	.48	.50	.36	.19	.10	.18	.37	1.00																		
Stanford Ach. Test	24	-.12	.25	.27	-.14	-.04	-.15	-.12	-.04	-.11	-.00	-.01	-.24	.63	.54	.59	.54	.54	.42	.23	.11	.19	.40	.73	1.00																	
Work Knowledge	25	-.12	.22	.29	-.14	-.08	-.18	-.12	-.04	-.10	.01	.00	-.24	.60	.49	.51	.50	.46	.38	.18	.07	.17	.36	.73	.78	1.00																
Work Discrim.	26	-.10	.21	.23	-.13	-.06	-.16	-.11	-.06	-.10	.01	.00	-.26	.59	.49	.54	.48	.46	.34	.19	.07	.18	.37	.70	.76	.82	1.00															
Reading	27	-.11	.25	.28	-.14	-.06	-.16	-.13	-.03	-.10	-.00	-.01	-.24	.60	.49	.49	.51	.47	.38	.19	.09	.17	.39	.72	.77	.81	.75	1.00														
Spelling	28	-.09	.19	.23	-.12	-.02	-.12	-.09	-.05	-.09	.01	.01	-.26	.59	.50	.63	.48	.48	.33	.23	.11	.19	.38	.66	.76	.74	.77	.66	1.00													
Language	29	-.11	.24	.23	-.13	-.06	-.15	-.11	-.04	-.09	-.00	.01	-.24	.56	.51	.55	.47	.51	.36	.23	.12	.20	.39	.66	.72	.69	.68	.69	.70	1.00												
Arith. Comp.	30	-.09	.19	.21	-.08	-.04	-.10	-.09	-.04	-.07	-.02	-.03	-.21	.42	.40	.45	.41	.57	.34	.16	.16	.20	.37	.56	.56	.53	.54	.53	.54	.62	1.00											
Arith. Prob. Solv.	31	-.09	.22	.29	-.09	-.05	-.11	-.10	-.04	-.08	.01	.00	-.21	.52	.45	.49	.48	.58	.39	.17	.12	.16	.38	.66	.69	.66	.64	.67	.62	.66	.72	1.00										
Reader Level	32	-.11	.12	.20	-.11	-.04	-.12	-.10	-.02	-.08	-.00	-.01	-.27	.57	.46	.50	.46	.46	.33	.23	.10	.19	.37	.58	.64	.65	.65	.61	.63	.57	.45	.55	1.00									
Progress	33	-.14	.09	.19	-.10	-.03	-.12	-.13	-.05	-.11	-.01	-.03	-.32	.48	.39	.43	.38	.39	.24	.15	.09	.17	.34	.51	.50	.55	.57	.50	.54	.50	.44	.51	.58	1.00								
Needs Help	34	.10	-.11	-.19	.07	.05	.10	.11	.01	.09	.05	.05	.28	-.55	-.49	-.55	-.46	-.50	-.28	-.22	-.14	-.23	-.42	-.56	-.62	-.60	-.62	-.57	-.63	-.58	-.47	-.55	-.62	-.65	1.00							
Special Instruction	35	.05	-.06	-.11	.03	.02	.04	.06	.01	.06	.01	.02	.24	-.35	-.34	-.35	-.30	-.30	-.19	-.10	-.06	-.10	-.26	-.40	-.40	-.41	-.41	-.38	-.42	-.39	-.33	-.38	-.41	-.44	.59	1.00						
Outstanding Areas	36	-.07	.13	.20	-.09	.00	-.08	-.07	.01	-.06	-.05	-.08	-.11	.44	.39	.41	.39	.42	.35	.31	.11	.17	.31	.40	.49	.42	.39	.43	.46	.41	.32	.38	.39	.23	-.32	-.17	1.00					
Acceptance	37	-.07	.07	-.06	.02	-.05	-.02	-.10	-.06	-.07	-.03	-.01	-.09	.13	.12	.12	.10	.14	.06	.09	.18	.15	.19	.10	.09	.07	.10	.08	.08	.09	.09	.09	.10	.17	-.16	-.05	.06	1.00				
Use of Time	38	-.13	.08	.07	-.02	-.05	-.05	-.14	-.01	-.11	-.00	.00	-.23	.41	.37	.42	.35	.40	.21	.19	.18	.27	.44	.36	.40	.35	.39	.37	.41	.39	.37	.38	.40	.48	-.51	-.29	.25	.35	1.00			
Responsibility	39	-.12	.08	.06	-.05	-.04	-.06	-.13	.01	-.10	-.03	-.01	-.24	.40	.38	.41	.37	.39	.24	.21	.20	.27	.45	.35	.39	.34	.37	.35	.40	.37	.36	.36	.37	.47	-.48	-.26	.25	.36	.80	1.00		
Needs Help	40	-.07	-.04	.04	-.01	.07	.05	.09	-.02	.06	.04	.02	.14	-.28	-.30	-.29	-.24	-.27	-.09	-.18	-.19	-.24	-.37	-.21	-.27	-.20	-.23	-.24	-.24	-.24	-.22	-.23	-.22	-.27	.42	.24	-.10	-.24	-.51	-.48	1.00	
Outstanding	41	-.04	.11	.07	-.02	-.00	-.01	-.02	.00	-.01	.01	-.01	-.04	.21	.20	.18	.22	.21	.19	.15	.13	.12	.24	.16	.19	.17	.17	.19	.23	.19	.17	.19	.18	.14	-.12	-.03	.43	.10	.20	.21	-.02	1.00

r = .05 significant at .01 level

TABLE 4

CORRELATION COEFFICIENTS, MEANS, AND STANDARD DEVIATIONS FOR SELECTED VARIABLES WITH TOTAL GPA AS THE DEPENDENT VARIABLE

(Grade 12 N=1104)

Variables	r	Means	Standard Deviations
Y Total GPA		2.37	.843
X_1 Total SCAT	.617**	66.48	25.431
X_2 Average days absent	-.181**	7.00	4.988
X_3 Hours work per week	-.170**	3.48	3.054
X_4 Father's occupation	.243**	39.97	22.561
X_5 High school clubs	.523**	7.67	3.633
X_6 Total attitude	.255**	926.40	95.456
X_7 Total problems	-.277**	14.50	7.981

**Significant at the .01 level.

TABLE 5

CORRELATION MATRIX FOR TOTAL GRADE POINT AVERAGES AND SEVEN INDEPENDENT VARIABLES

(Grade 12 N=1104)

Variables	Y	X_1	X_2	X_3	X_4	X_5	X_6	X_7
Y Total GPA	1.000							
X_1 Total SCAT	.617	1.000						
X_2 Av. days absent	-.181	-.088	1.000					
X_3 Hr. worked/week	-.170	-.070	.005	1.000				
X_4 Father's occup.	.243	.243	-.042	-.055	1.000			
X_5 H.S. clubs	.523	.352	-.090	-.152	.150	1.000		
X_6 Total attitude	.255	.210	-.035	-.057	.063	.259	1.000	
X_7 Total problems	-.227	-.168	.080	-.044	-.085	-.127	-.250	1.000

TABLE 6

REGRESSION COEFFICIENTS, BETA COEFFICIENTS, CONTRIBUTIONS TO THE VARIANCE IN Y, (TOTAL ACADEMIC GPA) BY EACH INDEPENDENT VARIABLE FOR THE MULTIPLE CORRELATION, $R_{y.\ 1,2,3,4,5,6,7}$

(Grade 12)

	b_{yk}	β_{yk}	$\beta_{yk}r_{yk}$	Partial r
Constant	.6588			
X_1 Total SCAT	.0150	.4532	.2785	$r_{y\ 1.2,3,4,5,6,7} = .509$
X_2 Average days absent	-.0172	-.0102	.0185	$r_{y\ 2.1,3,4,5,6,7} = -.145$
X_3 Hours worked per week	-.0223	-.0809	.0138	$r_{y\ 2.1,2,4,5,6,7} = -.115$
X_4 Father's occupation	.0025	.0682	.0166	$r_{y\ 4.1,2,3,5,6,7} = .095$
X_5 High school clubs	.0717	.3094	.1618	$r_{y\ 5.1,2,3,4,6,7} = .375$
X_6 Total attitude	.0004	.0465	.0119	$r_{y\ 6.1,2,3,4,5,7} = .063$
X_7 Total problems	-.0087	-.0822	.0183	$r_{y\ 7.1,2,3,4,5,6} = -.113$

$$\Sigma \beta_{yk} r_{yk} = R^2 = .5206$$

$$R_{y.\ 1,2,3,4,5,6,7} = .7215$$

$$SE_y = .5858$$

TABLE 7

DATA FOR THREE SELECTED MULTIPLE REGRESSION EQUATIONS WITH TOTAL ACADEMIC GRADE POINT AVERAGE AS A DEPENDENT VARIABLE
(N=1104)

	b_{yk}	β_{yk}	$\beta_{yk}r_{yk}$	Partial r
Constant	.0318			
X_1 Total SCAT	.0157	.4704	.2914	$r_{y\ 1.4,5,6} = .517$
X_4 Father's occupation	.0027	.0722	.0173	$r_{y\ 4.1,5,6} = .098$
X_5 High school clubs	.0763	.3275	.1718	$r_{y\ 5.1,4,6} = .389$
X_6 Total attitude	.0007	.0739	.0192	$r_{y\ 6.1,4,5} = .100$

$R^2 = .4997$

$R_{y.\ 1,4,5,6} = .7069$

$SE_y = .6034$

Constant	.3026			
X_1 Total SCAT	.0194	.5789	.3594	$r_{y\ 1.2,3,5} = .597$
X_2 Average days absent	-.0181	-.1089	.0178	$r_{y\ 2.1,3,5} = -.142$
X_3 Hours worked per week	-.0291	-.1049	.0158	$r_{y\ 3.1,2,5} = -.137$
X_5 Total attitude	.0011	.1254	.0319	$r_{y\ 5.1,2,3} = .160$

$R^2 = .4250$

$R_{y.\ 1,2,3,5} = .6519$

$SE_y = .6468$

Constant	.4446			
X_1 Total SCAT	.0160	.4775	.2956	$r_{y\ 1.5,6,7} = .531$
X_5 High school clubs	.0786	.3335	.1752	$r_{y\ 5.1,6,7} = .398$
X_6 Total attitude	.0004	.0503	.0128	$r_{y\ 6.1,5,7} = .067$
X_7 Total problems	-.0099	-.0924	.0205	$r_{y\ 7.1,5,6} = -.125$

$R^2 = .5040$

$R_{y.\ 1,5,6,7} = .7099$

$SE_y = .6011$

TABLE 8

COLLEGE PLANS
(Grade 12 N=1529)

Group	Boys	Girls	Total
Going to college	520(486)[a]	457(491)	973
Not going to college	125(178)	233(180)	358
Undecided	116(97)	78(97)	194
Total	761	768	1,529

[a] Figures in parentheses represent expected frequencies.

TABLE 9

CELL CONTRIBUTION TO THE CHI-SQUARE FOR COLLEGE PLANS
(Grade 12)

Group	$\frac{(o-e)^2}{e}$
Boys going to college	2.38
Girls going to college.	2.35
Boys not going to college	15.78
Girls not going to college. . . .	15.61
Boys undecided.	3.72
Girls undecided	3.72
Chi-square	43.56***

***Significant at the .001 level.

TABLE 10

NUMBER OF BOYS OWNING A CAR
(Grade 12 N=761)

Group	Did Not Own a Car	Owned a a Car	Total
Going to college	320(289)[a]	200(231)	520
Not going to college	57(69)	68(56)	125
Undecided	46(64)	70(52)	116
Total	423	338	761

[a] Figures in parentheses represent expected frequencies.

TABLE 11

CELL CONTRIBUTION TO THE CHI-SQUARE FOR CAR OWNERSHIP
(Grade 12)

Group	$\frac{(o-e)^2}{e}$
Going to college did not own a car.	3.33
Going to college owned a car.	4.16
Not going to college did not own a car.	2.09
Not going to college owned a car.	2.57
Undecided did not own a car	5.06
Undecided owned a car	6.23
Chi-square.	23.44***

***Significant at the .001 level.

TABLE 12

NUMBER OF GIRLS OWNING A CAR (Grade 12 N=768)[a]

Group	Owned A Car	Did Not Own A Car	Total
Going to college	31(26)[b]	426(431)	457
Not going to college	8(13)	225(220)	233
Undecided	5(4)	73(74)	78
Total	44	724	768

[a] Computed chi-square of 3.31 was not significant.

[b] Figures in parentheses represent expected frequencies.

TABLE 13

NUMBER OF GIRLS WHO HAD PART-TIME WORK[a] (Grade 12 N=765)

Group	Did Not Work	Worked	Total
Going to college	279(278)[b]	176(177)	455
Not going to college	140(142)	93(91)	233
Undecided	48(47)	29(30)	77
Total	467	298	765

[a] Computed chi-square of 0.187 was not significant.

[b] Figures in parentheses represent expected frequencies.

TABLE 14

NUMBER OF BOYS WHO HAD PART-TIME WORK (Grade 12 N-758)

Group	Did Not Work	Worked	Total
Going to college	251(238)[a]	267(280)	518
Not going to college	63(57)	62(68)	125
Undecided	34(53)	81(62)	115
Total	348	410	758

[a] Figures in parentheses represent expected frequencies.

TABLE 15

CELL CONTRIBUTION TO CHI-SQUARE FOR PART-TIME WORK (BOYS) (Grade 12)

Group	$\frac{(o-e)^2}{e}$
Going to college did not work.	0.710
Going to college worked.	0.604
Not going to college did not work. . .	0.632
Not going to college worked.	0.529
Undecided did not work	6.811
Undecided worked	5.823
Chi-square.	15.109***

***Significant at the .001 level.

TABLE 16

SOCIOECONOMIC INDEX FOR FATHER'S OCCUPATION (BOYS)
(Grade 12 N=696)

Group	0-59	60-99	Total
Going to college	345(376)[a]	134(103)	479
Not going to college	105(88)	7(24)	112
Undecided	96(82)	9(23)	105
Total	546	150	696

[a] Figures in parentheses represent expected frequencies.

TABLE 17

CELL CONTRIBUTION FOR SOCIOECONOMIC INDEX
(Grade 12 Boys)

Group	$\frac{(o-e)^2}{e}$
Going 0-59.	2.556
Going 60-99	9.330
Not going 0-59	3.284
Not going 60-99	12.042
Undecided 0-59	2.390
Undecided 60-99	8.522
Chi-square.	38.124***

***Significant at the .001 level.

TABLE 18

SOCIOECONOMIC INDEX FOR FATHER'S OCCUPPATION
(Girls Grade 12 N=691)

Group	0-59	60-99	Total
Going to college	287(325)[a]	137(99)	424
Not going to college	185(155)	17(47)	202
Undecided	58(50)	7(15)	65
Total	530	161	691

[a] Figures in parentheses represent expected frequencies.

TABLE 19

CELL CONTRIBUTION FOR SOCIOECONOMIC INDEX
(Girls Grade 12)

Group	$\frac{(o-e)^2}{e}$
Going 0-59	4.443
Going 60-99	14.586
Not going 0-59	5.806
Not going 60-99	19.149
Undecided 0-59	1.280
Undecided 60-99	4.267
Chi-square	49.532***

***Significant at the .001 level.

TABLE 20

NUMBER OF MOTHERS WORKING OUTSIDE THE HOME (BOYS)[a] (Grade 12 N=758)

Group	Mother-Working	Mother Not Working	Total
Going to college	239(239)[b]	279(279)	518
Not going to college	57(58)	68(67)	125
Undecided	54(53)	61(62)	115
Total	350	408	758

[a] Computed chi-square of 0.07 was not significant.

[b] Figures in parentheses represent expected frequencies.

TABLE 21

NUMBER OF MOTHERS WORKING OUTSIDE THE HOME (GIRLS)[a] (Grade 12 N=766)

Group	Mother-Working	Mother Not Working	Total
Going to college	215(211)[b]	240(244)	455
Not going to college	105(108)	128(125)	233
Undecided	35(36)	43(42)	78
Total	355	411	766

[a] Computed chi-square of 0.35 was not significant.

[b] Figures in parentheses represent expected frequencies.

TABLE 22

BOTH PARENTS LIVING (BOYS)[a]
(Grade 12 N=760

Group	Both Living	One or Both Not Living	Total
Going to college	475(469)[b]	44(50)	519
Not going to college	106(113)	19(12)	116
Undecided	106(105)	10(11)	116
Total	687	73	760

[a] Computed chi-square of 5.39 was not significant.

[b] Figures in parentheses represent expected frequencies.

TABLE 23

BOTH PARENTS LIVING (GIRLS)[a]
(Grade 12 N-768)

Group	Both Living	One or Both Not Living	Total
Going to College	415(410)[b]	42(47)	457
Not going to college	206(209)	27(24)	233
Undecided	68(70)	10(8)	78
Total	689	79	768

[a] Computed chi-square of 1.57 was not significant.

[b] Figures parentheses represent expected frequencies.

TABLE 24

NUMBER OF BOYS WHOSE PARENTS WERE SEPARATED[a]
(Grade 12 N=758)

Group	Not Separated	Separated	Total
Going to college	456(446)[b]	63(73)	519
Not going to college	102(108)	23(17)	125
Undecided	94(98)	20(16)	114
Total	652	106	758

[a] Computed chi-square of 5.20 was not significant.

[b] Figures in parentheses represent expected frequencies.

TABLE 25

NUMBER OF GIRLS WHOSE PARENTS WERE SEPARATED[a]
(Grade 12 N=760)

Group	Not Separated	Separated	Total
Going to college	406(396)[b]	47(57)	453
Not going to college	194(201)	36(29)	230
Undecided	64(67)	13(10)	77
Total	664	96	760

[a] Computed chi-square of 4.96 was not significant.

[b] Figures in parentheses represent expected frequencies.

TABLE 26

NUMBER OF BOYS WHO REPEATED GRADES
(Grade 12 N=760)

Groups	Did Not Repeat	Repeated	Total
Going to college	489(467)[a]	31(53)	520
Not going to college	100(111)	24(13)	124
Undecided	93(104)	23(12)	116
Total	682	78	760

[a] Figures in parentheses represent expected frequencies.

TABLE 27

CELL CONTRIBUTION TO THE CHI-SQUARE FOR REPEATED GRADES (BOYS)
(Grade 12)

Group	$\frac{(o-e)^2}{e}$
Going to college did not repeat.	1.04
Going to college repeated.	9.13
Not going to college did not repeat. . .	1.09
Not going to college repeated.	9.31
Undecided did not repeat	1.16
Undecided repeated	10.08
Chi-square.	31.81***

***Significant at the .001 level.

TABLE 28

NUMBER OF GIRLS WHO REPEATED GRADES
(Grade 12 N=767)

Group	Did Not Repeat	Repeated	Total
Going to college	448(438)[a]	8(18)	456
Not going to college	212(224)	21(9)	233
Undecided	75(75)	3(3)	78
Total	735	32	767

[a] Figures in the parentheses represent expected frequencies.

TABLE 29

CELL CONTRIBUTION TO CHI-SQUARE
FOR REPEATED GRADES (GIRLS)
(Grade 12)

Group	$\frac{(o-e)^2}{e}$
Going to college did not repeat	0.23
Going to college repeated	5.56
Not going to college did not repeat . .	0.64
Not going to college repeated	16.00
Undecided did not repeat	0.00
Undecided repeated	0.00
Chi-square	22.43***

***Significant at the .001 level

TABLE 30

NUMBER OF BOYS WHO FAILED COURSES
(Grade 12 N=760)

Group	Not Failed	Failed	Total
Going to college	361(301)[a]	158(218)	519
Not going to college	41(73)	84(52)	125
Undecided	39(67)	77(49)	116
Total	441	319	760

[a] Figures in parentheses represent expected frequencies.

TABLE 31

CELL CONTRIBUTION TO CHI-SQUARE FOR FAILED COURSES (BOYS)
(Grade 12)

Group	$\frac{(o-e)^2}{e}$
Going to college did not fail	11.96
Going to college failed	16.51
Not going to college did not fail	14.03
Not going to college failed	19.69
Undecided did not fail	11.70
Undecided failed	16.00
Chi-square	89.89***

***Significant at the .001 level

TABLE 32

NUMBER OF GIRLS WHO FAILED COURSES
(Grade 12 N=764)

Group	Not Failed	Failed	Total
Going to college	424(394)[a]	31(61)	455
Not going to college	181(201)	51(31)	232
Undecided	57(67)	20(10)	77
Total	662	102	764

[a]Figures in parentheses represent expected frequencies.

TABLE 33

CELL CONTRIBUTION TO CHI-SQUARE FOR FAILED COURSES (GIRLS)
(Grade 12)

Groups	$\frac{(o-e)^2}{e}$
Going to college did not fail	2.28
Going to college failed	14.75
Not going to college did not fail . .	1.99
Not going to college failed	12.90
Undecided did not fail	1.49
Undecided failed	10.00
Chi-square	43.41***

***Significant at the .001 level.

TABLE 34

NUMBER OF BOYS AND GIRLS IN GROUPS SELECTED ON THE BASIS OF ATTITUDE TOWARD SCHOOL AND POSTHIGH SCHOOL PLANS

(Grade 12 N-204)

Group According to Attitude and College Plans	Boys	Girls	Total
High--going	19(22)[a]	31(28)	50
Low--going	32(22)	19(29)	51
High--not going	9(22)	41(28)	50
Low--not going	28(23)	25(30)	53
Total	88	116	204

[a] Figures in the parentheses have reference to expected frequencies.

TABLE 35

CELL CONTRIBUTION TO THE CHI-SQUARE FOR MALE AND FEMALE GROUPS

(Grade 12)

Group According to Attitude and College Plans	$\frac{(o-e)^2}{e}$
Boys--high going	0.41
Girls--high going	0.32
Boys--low going	4.55
Girls--low going	3.45
Boys--high not going	7.68
Girls--high not going	6.03
Boys--low not going	1.09
Girls--low not going	0.83
Chi-square	24.36***

***Significant at the .001 level.

TABLE 36

NUMBER OF BOYS IN GROUPS WHO OWNED A CAR[a]
(Grade 12 N=88)

Group According to Attitude and College Plans	Did Not Own a Car	Owned a Car	Total
High--going	13(9)[b]	6(10)	19
Low--going	16(16)	16(16)	32
High--not going	3(4)	6(5)	9
Low--not going	11(14)	17(14)	28
Total	43	45	88

[a] Computed chi-square of 5.11 was not significant.

[b] Figures in parentheses represent expected frequencies.

TABLE 37

NUMBER OF GIRLS IN GROUPS WHO OWNED A CAR[a]
(Grade 12 N=116)

Group According to Attitude and College Plans	Did Not Own a Car	Owned a Car	Total
High--going	28(28)[b]	3(3)	31
Low--going	16(17)	3(2)	19
High--not going	39(37)	2(4)	41
Low--not going	21(22)	4(3)	25
Total	104	12	116

[a] Expected frequencies too small. Chi-square not used.

[b] Figures in parentheses represent expected frequencies.

TABLE 38

NUMBER OF BOYS IN GROUPS WHOSE MOTHER WORKED[a]
(Grade 12 N=88)

Group According to Attitude and College Plans	Did Not Work	Worked	Total
High--going	10(11)[b]	9(8)	19
Low--going	17(18)	15(14)	32
High--not going	4(5)	5(4)	9
Low--not going	18(16)	10(12)	28
Total	49	39	88

[a] Computed chi-square of 1.08 was not significant.

[b] Figures in parentheses represent expected frequencies.

TABLE 39

NUMBER OF GIRLS IN GROUPS WHOSE MOTHER WORKED[a]
(Grade 12 N=116)

Group According to Attitude and College Plans	Did Not Work	Worked	Total
High--going	21(17)[b]	10(14)	31
Low--going	6(11)	13(8)	19
High--not going	23(23)	18(18)	41
Low--not going	15(14)	10(11)	25
Total	65	51	116

[a] Computed chi-square of 6.44 was not significant.

[b] Figures in parentheses represent expected frequencies.

TABLE 40

NUMBER OF BOYS IN GROUPS WHO FAILED
(Grade 12 N=88)

Group According to Attitude and College Plans	Did Not Fail	Failed	Total
High--going	16(10)[a]	3(9)	19
Low--going	18(17)	14(15)	32
High--not going	1(5)	8(4)	9
Low--not going	12(15)	16(13)	28
Total	47	41	88

[a] Figures in the parentheses represent expected frequencies.

TABLE 41

CELL CONTRIBUTION TO THE CHI-SQUARE FOR COURSES FAILED, BOYS GROUPS
(Grade 12)

Group According to Attitude and College Plans	$\frac{(o-e)^2}{e}$
High--going did not fail	3.60
High--going failed	4.00
Low--going did not fail.	0.06
Low--going failed.	0.70
High--not going did not fail	3.20
High--not going failed	4.00
Low--not going did not fail.	0.60
Low--not going failed.	0.70
Chi-square.	16.86

TABLE 42

NUMBER OF GIRLS IN GROUPS WHO FAILED
(Grade 12 N=116)

Group According to Attitude and College Plans	Did Not Fail	Failed	Total
High--going	28(25)[a]	3(6)	31
Low--going	18(15)	1(4)	19
High--not going	32(32)	9(9)	41
Low--not going	15(20)	10(5)	25
Total	93	23	116

[a] Figures in parentheses represent expected frequencies.

TABLE 43

CELL CONTRIBUTION TO THE CHI-SQUARE FOR COURSES FAILED, GIRLS GROUPS
(Grade 12)

Group According to Attitude and College Plans	$\frac{(o-e)^2}{e}$
High--going did not fail	0.36
High--going failed	1.50
Low--going did not fail	0.60
Low--going failed	2.25
High--not going did not fail	0.00
High--not going failed	0.00
Low--not going did not fail.	1.25
Low--not going failed.	5.00
Chi-square.	10.96**

**Significant at the .02 level.

TABLE 44

NUMBER OF STUDENTS WHO HAD OLDER SIBLINGS[a]
(Grade 12 N=204)

Group According to Attitude and College Plans	Did Not Have Older Siblings	Had Older Siblings	Total
High--going	30(25)[b]	20(25)	50
Low--going	26(25)	25(26)	51
High--not going	24(25)	26(25)	50
Low--not going	20(26)	33(27)	53
Total	100	104	204

[a] Computed chi-square of 4.87 was not significant.

[b] Figures in parentheses represent expected frequencies.

TABLE 45

NUMBER OF STUDENTS WHOSE OLDER SIBLINGS GRADUATED FROM HIGH SCHOOL
(Grade 12 N=104)

Group According to Attitude and College Plans	Did Not Graduate	Graduated	Total
High--going	2(4)[a]	18(16)	20
Low--going	1(6)	24(19)	25
High--not going	8(6)	18(20)	26
Low--not going	13(8)	20(27)	33
Total	24	80	104

[a] Figures in parentheses represent expected frequencies.

TABLE 46

CELL CONTRIBUTION TO THE CHI-SQUARE FOR OLDER SIBLINGS GRADUATED
(Grade 12)

Group According to Attitude and College Plans	$\frac{(o-e)^2}{e}$
High--going did not graduate	1.00
High --going graduated	0.25
Low--going did not graduate	4.17
Low--going graduated	1.32
High--not going did not graduate	0.67
High--not going graduated	0.02
Low--not going did not graduate	3.13
Low--not going graduated	0.93
Chi-square.	11.67*

Significant at the .01 level.

TABLE 47

NUMBER OF STUDENTS WHO CONSIDERED DROPPING OUT OF SCHOOL (Grade 12 N=204)

Group According to Attitude and College Plans	Did Not Consider	Considered Dropping	Total
High--going	50(43)[a]	0(7)	50
Low--going	44(44)	7(7)	51
High--not going	44(43)	6(7)	50
Low--not going	38(46)	15(7)	53
Total	176	28	204

[a] Figures in parentheses refer to expected frequencies.

TABLE 48

CELL CONTRIBUTION TO THE CHI-SQUARE FOR THE NUMBER WHO CONSIDERED DROPPING OUT OF SCHOOL (Grade 12)

Group According to Attitude and College Plans	$\frac{(o-e)^2}{e}$
High--going did not consider.	1.14
High--going considered dropping	7.00
Low--going did not consider	0.00
Low--going considered dropping.	0.00
High--not going did not consider.	0.02
High--not going considered dropping	0.14
Low--not going did not consider	1.39
Low--not going considered dropping.	9.14
Chi-square.	18.84***

***Significant at the .001 level.

TABLE 49

NUMBER OF STUDENTS WHO ANTICIPATED OCCUPATIONS YIELDING CERTAIN SOCIOECONOMIC RATINGS

(Grade 12 N=204)

Group According to Attitude and College Plans	No Plans	0-59	60-99	Total
High--going	1(8.3)[a]	10(23.3)	39(18.4)	50
Low--going	5(8.5)	23(23.7)	23(18.7)	51
High--not going	12(8.3)	29(23.3)	9(18.4)	50
Low--not going	16(8.8)	33(24.7)	4(19.5)	53
Total	34	95	75	204

[a] Figures in parentheses refer to expected frequencies.

TABLE 50

CELL CONTRIBUTION TO THE CHI-SQUARE FOR ANTICIPATED OCCUPATIONS

(Grade 12)

Group According to Attitude and College Plans	$\frac{(o-e)^2}{e}$
High--going no plans	6.42
High--going 0-59	7.59
High--going 60-99	23.06
Low--going no plans	1.44
Low--going 0-59	0.02
Low--going 60-99	0.99
High--not going no plans	1.65
High--not going 0-59	1.39
High--not going 60-99	4.80
Low--not going no plans	5.89
Low--not going 0-59	2.79
Low--not going 60-99	12.32
Chi-square	68.36***

***Significant at the .001 level.

TABLE 51

EXTENT OF VOCATIONAL PLANNING DONE BY THE STUDENTS AS JUDGED BY INTERVIEWERS
(Grade 12 N=204)

Group According to Attitude and College Plans	No Planning	Superficial Planning	Significant Planning	Extensive Planning	Total
High--going	1(6.9)[a]	17(14.7)	21(21.6)	11(6.8)	50
Low--going	10(7.0)	14(15.0)	20(22.0)	7(7.0)	51
High--not going	4(6.9)	13(14.7)	28(21.6)	5(6.9)	50
Low--not going	13(7.3)	16(15.6)	19(22.9)	5(7.3)	53
Total	28	60	88	28	204

[a] Figures in parentheses refer to expected frequencies.

TABLE 52

CELL CONTRIBUTION TO THE CHI-SQUARE FOR VOCATIONAL PLANNING
(Grade 12)

Group According to Attitude and College Plans	$\frac{(o-e)^2}{e}$
High--going no planning	5.04
High--going superficial planning	0.36
High--going significant planning	0.02
High--going extensive planning	2.44
Low--going no planning	1.29
Low--going superficial planning	0.07
Low--going significant planning	0.18
Low--going extensive planning	0.00
High--not going no planning	1.23
High--not going superficial planning	0.20
High--not going significant planning	1.90
High--not going extensive planning	0.52
Low--not going no planning	4.45
Low--not going superficial planning	0.01
Low--not going significant planning	0.66
Low--not going extensive planning	0.72
Chi-square	19.09**

**Significant at the .025 level.

TABLE 53

MEANS OF STANDARDIZED ABILITY TEST SCORES
(Grade 12)

Test Areas	Group			
	Low Not Going	High Not going	Low going	High Going
DAT Verbal	36	49	59	62
DAT Number	40	54	60	64
DAT Abstract	52	67	64	66
DAT Space Relations	47	65	55	59
DAT Mechanical	52	55	53	58
SCAT Verbal	41	59	73	71
SCAT Quantitative	41	59	73	71
SCAT Total	40	59	72	71

TABLE 54

DIFFERENCE BETWEEN THE MEAN ABILITY SCORES[a]
(Grade 12)

Test Areas	High Not v.s. Low Not	Low Going v.s. Low Not	High Going v.s. Low Not	Low Going v.s. High Not	High Going v.s. High Not	High Going v.s. Low Going
DAT Verbal	13*	23**	26**	10	13*	3
DAT Number	14	20**	24**	6	10	4
DAT Abstract	15**	12*	14	- 3	- 1	2
DAT Space Relations	18**	8*	12*	-10	- 6	4
DAT Mechanical	3	1	6	- 2	3	5
SCAT Verbal	18**	32**	30**	14*	12*	-2
SCAT Quantitative	14*	24**	24**	10	10	0
SCAT Total	19**	32**	31**	13**	12*	-1

[a] In all comparisons the mean of the second mentioned group is subtracted from the first.

*Significant at the .05 level.
**Significant at the .01 level.

TABLE 55

MEAN GRADE POINT AVERAGES
(Grade 12)

Subject Area	Group			
	Low Not Going	High Not Going	Low Going	High going
English	1.58	2.42	2.30	2.82
Social	1.53	2.31	2.40	2.92
Mathematics	1.92	2.06	2.08	2.47
Foreign Language	2.27[a]	2.55[b]	2.23[c]	2.72[d]
Natural Science	1.75	2.25	2.18	2.65
Total Academic	1.64	2.19	2.18	2.67
Other	2.32	3.13	2.87	3.31

[a] N=11. [b] N=22. [c] N=39. [d] N=39.

TABLE 56

DIFFERENCES BETWEEN THE MEAN GRADE POINT AVERAGES[a]
(Grade 12)

Subject Area	Group					
	High Not v.s. Low Not	Low Going v.s. Low Not	High Going v.s. Low Not	Low Going v.s. High Not	High Going v.s. High Not	High Going v.s. Low Going
English	.84*	.72**	1.24**	.12	.40*	.52**
Social Studies	.78*	.87**	1.39**	.09	.61**	.52**
Mathematics	.14	.16	.53**	.02	.41**	.39*
Foreign Language	.28	-.04	.45	-.32	.17	.49*
Natural Science	.50	.43**	.90**	-.07	.40*	.47**
Total Academic	.55	.54*	1.03*	-.01	.46**	.49**
Other	.81	.53*	.99*	-.26	.18	.44

[a] In all comparisons the mean of the second mentioned group is subtracted from the mean of the first.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 57

MEAN SCORES FOR ACTIVITY INVENTORIES
(Grade 12)

Activity Areas	Groups			
	Low Not Going	High Not Going	Low Going	High Going
Fine arts	11.2	11.7	11.6	11.5
Clubs	5.0	7.3	6.3	9.1
Intramural	15.2	15.8	14.5	15.5
Interschool	13.8	14.5	14.8	14.3
Student government	5.1	6.5	5.7	8.1
Committee	8.0	9.4	8.4	10.3

TABLE 58

DIFFERENCE BETWEEN THE MEANS FOR ACTIVITY SCORES[a]
(Grade 12)

Variables	High Not v.s. Low Not	Low Going v.s. Low Not	High Going v.s. Low Not	Low Going v.s. High Not	High Going v.s. High Not	High Going v.s. Low Going
Fine arts	.5	.4	.3	.1	- .2	.1
Clubs	2.3**	1.3*	4.1**	-1.0	1.8*	2.8**
Intramural	.6	- .7	.3	-1.3*	- .3	1.0
Interschool	.7	1.0	.5	.3	- .2	- .5
Student Government	1.4**	.6	3.0**	- .8	1.6**	2.4**
Committee	1.4**	.4	2.3**	-1.0	.9	1.9**

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[a] In all comparisons the mean of the second mentioned group is subtracted from the mean of the first.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 59

MEAN NUMBER OF PROBLEMS CHECKED
(Grade 12)

Problem Area	Group			
	Low Not Going	High Not Going	Low Going	High Going
FVE	5.5	5.2	5.0	4.5
ASW	6.7	5.5	6.0	5.3
CTP	4.9	4.3	5.5	4.2
Total	16.5	13.7	15.1	12.9

TABLE 60

DIFFERENCE BETWEEN THE MEAN NUMBER OF PROBLEMS CHECKED[a]
(Grade 12)

Problem Area	Low Not v.s. High Not	Low Not v.s. Low Going	Low Not v.s. High Going	High Not v.s. Low Going	High Not v.s High Going	High Not v.s Low Going
FVE	.3	.5	1.0	.2	.7	.5
ASW	1.2**	.7	1.4	- .5	.2	.7
CTP	.6	- .6	.7	-1.2	.1	1.3
Total	2.8**	1.4	3.6*	-1.4	.8	2.2

[a] In all comparisons the mean of the second mentioned group is subtracted from the mean of the first.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 61

ANALYSIS OF COVARIANCE FOR CERTAIN VARIABLES ADJUSTED FOR SCAT TOTAL F VALUES (Grade 12)

Variables	Unf. Not vs. Fav. Not	Unf. Not vs. Unf. Going	Unf. Not vs. Fav. Going	Fav. Not vs. Unf. Going	Fav. Not vs. Fav. Going	Unf. Going vs. Fav. Going
Total GPA	14.18*	1.99	10.83**	1.67	2.99	8.23**
Other GPA	2.89	0.68	8.88**[a]	1.22	2.58	7.72**
High school clubs	4.68*[a]	0.05	8.42**[b]	5.03*	1.82	19.24**
Student government	6.56*[a]	0.19	6.77*	4.15*	0.89	14.08**
Committees	4.50*[b]	0.47	4.29*	3.59	0.91	8.75**[b]

[a] Homogeneity of variance questioned.

[b] Significantly different slope.

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 62

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN FOURTH GRADE STANFORD ACHIEVEMENT SCORES FOR DROPOUTS AND TOTAL STAYINS

(Grade 8)

Test	Dropout Means (N=49)	Stayin Means (N=1762)	Differences	CR
Reading Par. Mean	5.21	5.53	0.32	0.39
Language Usage	4.56	5.00	0.44	0.79
Arithmetic Reas.	4.59	4.89	0.30	0.71
Battery Median	4.62	4.87	0.25	1.58

TABLE 63

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN EIGHTH GRADE ACHIEVEMENT TEST SCORES FOR DROPOUTS AND TOTAL STAYINS

(Grade 8)

Test	Dropout Means (N-79)	Stayin Means (N=2128)	Differences	CR
Reading Comp.	5.14	5.79	.65	2.51**
Language	4.68	5.50	.82	3.47***
Lang. Study Skills	5.01	5.98	.97	3.79***
Arith. Prob. Solv.	5.49	6.32	.83	3.57***
Soc. Study Info.	5.25	5.95	.70	2.83***
Science	5.48	6.19	.71	2.78***

**Significant at the .01 level.

TABLE 64

SIGNIFICANCE OF THE DIFFERENCE BETWEEN THE MEAN OF SCAT TOTALS FOR DROPOUTS AND STAYINS
(Grade 8)

Variable	Dropout Means[a] (N=71)	Stayin Means[a] (N=1489)	Difference	CR
SCAT Total	36.86	45.03	8.17	4.74***

[a] Recorded in converted scores.

***Significant at the .001 level.

TABLE 65

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN ACADEMIC GRADE AVERAGES FOR DROPOUTS AND TOTAL STAYINS
(Grade 8)

Varible	Dropout Means (N=93)	Stayin Means (N=2236)	Difference	CR
Academic Averages	1.63	2.26	0.63	1.97*

*Significant at the .05 level.

TABLE 66

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN NUMBER OF DAYS ABSENT IN THE EIGHTH GRADE FOR DROPOUTS AND TOTAL STAYINS

(Grade 8)

Variable	Dropout Means (N=91)	Stayin Means (N=2282)	Difference	CR
Days Absent	12.24	7.29	4.95	4.41***

***Significant at the .001 level

TABLE 67

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN SCORES OF ESTIMATING SELF ACADEMIC CAPABILITIES FOR DROPOUTS AND TOTAL STAYINS

(Grade 8)

Variable	Dropout Means (N=82)	Stayin Means (N=2267)	Difference	CR
Self Estimate	3.05	3.57	0.52	4.26***

***Significant at the .001 level.

TABLE 68

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN NUMBER OF HOURS WORKED PER WEEK FOR DROPOUTS AND TOTAL STAYINS

(Grade 8)

Variable	Dropout Means (N=82)	Stayin Means (N=2212)	Difference	CR
Hours work/wk.	3.21	2.78	0.43	1.95*

*Significant at the .05 level.

TABLE 69

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEANS OF OCCUPATIONAL STATUS OF FATHERS FOR DROPOUTS AND TOTAL STAYINS

(Grade 8)

Variable	Dropout Means (N=87)	Stayin Means (N=2150)	Difference	CR
Father's Occupation	32.40	40.06	7.66	2.64**

**Significant at the .01 level.

TABLE 70

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEANS OF EDUCATION ATTAINMENT OF FATHERS FOR DROPOUTS AND TOTAL STAYINS

(Grade 8)

Variable	Dropout Means (N=82)	Stayin Means (N=2273)	Difference	CR
Father's education	5.27	5.78	0.51	2.34**

** Significant at the .01 level.

TABLE 71

SIGNIFICANCE OF THE DIFFERENCES BETWEEN MEAN AMOUNT OF PARTICIPATION IN EXTRACURRICULAR ACTIVITIES FOR DROPOUTS AND TOTAL STAYINS

(Grade 8)

Activity	Dropout Means (N=84)	Stayin Means (N=2294)	Difference	CR
Arts & Sciences	9.54	10.21	0.67	2.15*
Sports	11.34	11.80	0.46	0.85
Clubs & Services	11.50	12.93	1.43	3.32***

*Significant at the .05 level.

***Significant at the .001 level.

TABLE 72

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN SCORES OF ATTITUDES TOWARDS SCHOOL CONCEPTS FOR DROPOUTS AND TOTAL STAYINS

(Grade 8)

Concepts	Dropout Means (N=86)	Stayin Means (N=2294)	Differences	CR
Tests	63.07	66.09	3.02	1.97*
Math	68.77	72.27	3.50	1.82*
Homework	57.30	61.92	4.62	2.23*
Reading	74.83	77.48	2.65	1.56
English	66.99	71.37	4.38	2.38**
Physical Educ.	73.22	74.54	1.32	0.67
Social Studies	68.51	72.07	3.56	2.05*
Grades	60.41	67.99	7.58	3.85***
Writing	70.71	73.22	2.51	1.63
Classmates	73.67	76.15	2.48	1.75*
Science	68.55	71.80	3.25	1.66*
Teachers	65.43	72.15	6.72	3.20***
School	64.99	74.91	9.92	4.72***
Total	875.48	930.08	54.60	3.24***

*Significant at the .05 level.

**Significant at the .01 level.

***Significant at the .001 level.

TABLE 73

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN NUMBER OF PROBLEMS FOR DROPOUTS AND TOTAL STAYINS

(Grade 8)

Problems	Dropout Means (N=93	Stayin Means (N=2005)	Differences	CR
School	9.39	7.56	1.83	3.17***
Money, Work Future	7.40	6.25	1.12	2.01*
People in General	6.80	5.91	0.89	1.50
Total	23.58	18.46	5.12	3.43***

*Significant at the .05 level.

***Significant at the .001 level.

TABLE 74

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN FOURTH GRADE ACHIEVEMENT SCORES FOR DROPOUTS AND MATCHED STAYINS (Grade 8)

Variables	Dropout Means	Stayin Means	Differences	df	t
Reading Par. Mean	5.21	4.91	0.30	48	0.66
Language Usage	4.56	3.88	0.68	48	1.70
Arithmetic Reas.	4.59	4.06	0.53	48	1.74
Battery Median	4.62	4.12	0.50	48	1.62

TABLE 75

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN EIGHTH GRADE ACHIEVEMENT SCORES FOR DROPOUTS AND MATCHED STAYINS (Grade 8)

Variables	Dropout Means	Stayin Means	Differences	df	t
Reading Comp.	5.14	5.15	0.01	79	0.03
Language	4.68	4.52	0.16	78	0.47
Language Stu. Skill	5.01	5.10	0.09	79	0.23
Arithmetic Prob. Solv.	4.49	5.44	0.05	78	0.15
Soc. Stu. Info.	5.25	5.31	0.06	79	0.17
Science	5.48	5.42	0.06	78	0.17

TABLE 76

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN ACADEMIC GPA FOR DROPOUTS AND MATCHED STAYINS
(Grade 8)

Variable	Dropout Means	Stayin Means	Difference	df	t
Academic GPA	1.63	1.98	0.35	92	2.59**

**Significant at the .01 level.

TABLE 77

SIGNIFICANCE OF THE DIFFERENCE BETWEEN THE NUMBER OF DAYS ABSENT IN THE EIGHTH GRADE FOR DROPOUTS AND MATCHED STAYINS
(Grade 8)

Variable	Dropout Means	Stayin Means	Difference	df	t
8th Grade Absences	12.24	7.98	4.26	90	3.14***

***Significant at the .001 level.

TABLE 78

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN SCORES FOR ESTIMATING SELF ACADEMIC CAPABILITIES FOR DROPOUTS AND MATCHED STAYINS
(Grade 8)

Variable	Dropout Means	Stayin Means	Difference	df	t
Self Estimate	3.05	3.13	0.08	81	0.47

TABLE 79

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN SCORES OF SATISFACTION OF RECEIVING VARIOUS GRADES DURING THE NINTH GRADE FOR DROPOUTS AND MATCHED STAYINS
(Grade 8)

Variables	Dropout Means	Stayin Means	Differences	df	t
Receiving "B"	1.88	1.77	0.11	83	0.66
Receiving "C"	3.06	3.18	0.12	83	0.64
Receiving "D"	4.56	4.49	0.07	83	0.55

TABLE 99

NUMBER OF STUDENTS IN GROUPS LIVING WITH MOTHER AND FATHER[a]
(Grade 8)

Group	Living With Both Parents		Total
	Yes	No	
Dropouts	48(50.0)[b]	37(29.0)	85
Stayins	68(60.0)	23(31.0)	91
Total	116	60	176

[a] Computed chi-square of 5.59 was significant at the .01 level.

[b] Figures in parentheses represent expected frequencies.

TABLE 100

OBSERVED MEAN VALUES OF EIGHT VARIABLES FOR DROPOUTS AND MATCHED STAYINS
(Grade 8)

Variables	Dropouts	Stayins (Matched)	Differences
1. Academic GPA	1.67	1.98	-0.31
2. Absences	11.76	8.10	3.66
3. Hours Work/wk.	3.22	2.73	0.49
4. No. Younger Sibs.	3.05	2.25	0.80
5. Activities: Arts & Sci.	.57	9.54	0.03
6. Activities: Sports	11.31	11.93	-0.62
7. Activities: Clubs	11.43	12.07	-0.64
8. Attitude: School	65.60	72.11	-0.51

TABLE 101

DISCRIMINANT WEIGHTS FOR COMBINATIONS OF VARIABLES, D^2 DISTANCE VALUES, AND F VALUES FOR DROPOUTS AND MATCHED STAYINS
(Grade 8)

Variables		Weights	
1. Academic GPA	X_1	-0.0000528	
2. Absences	X_2	0.0001500	0.0001630
3. Hours Work/wk	X_3	0.0005637	0.0005632
4. Younger Sibs.	X_4	0.0014517	0.0014488
5. Activities: Arts & Sci.	X_5	0.0004379	
6. Activities: Sports	X_6	-0.0000956	
7. Activities: Clubs	X_7	-0.0000191	
8. Attitude: School	X_8	-0.0001029	-0.0001044
	D^2	0.4940	0.4859
	F	2.5428**	4.8594**

**Significant at the .01 level of significance.

TABLE 80

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN NUMBER OF SUMMERS WORKED FOR DROPOUTS AND MATCHED STAYINS (Grade 8)

Variable	Dropout Means	Stayin Means	Difference	df	t
Summers worked	3.25	2.68	0.57	83	2.66***

***Significant at the .001 level.

TABLE 81

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN NUMBER OF HOURS WORKED FOR DROPOUTS AND MATCHED STAYINS (Grade 8)

Variable	Dropout Means	Stayin Means	Difference	df	t
Hours work/wk.	3.21	2.49	0.72	81	2.58*

*Significant at the .01 level.

TABLE 82

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN SCORES OF KIND OF WORK PLANNED AFTER FINISHING SCHOOL FOR DROPOUTS AND MATCHED STAYINS (Grade 8)

Variable	Dropout Means	Stayin Means	Difference	df	t
Kind of work	3.38	3.12	0.26	76	0.52

TABLE 83

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN AMOUNT OF EDUCATION ATTAINED BY THE PARENTS OF DROPOUTS AND MATCHED STAYINS (Grade 8)

Variable	Dropout Means	Stayin Means	Difference	df	t
Father's Educ.	5.27	5.62	0.35	81	1.11
Mother's Educ.	5.38	5.43	0.05	83	1.68

TABLE 84

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN NUMBER OF OLDER AND YOUNGER SIBLINGS FOR DROPOUTS AND MATCHED STAYINS (Grade 8)

Variable	Dropout Means	Stayin Means	Differences	df	t
Number Older Sibs.	2.21	2.07	0.14	83	0.60
Number Younger Sibs	3.02	2.30	0.72	83	2.85***

***Significant at the .001 level.

TABLE 85

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN NUMBER OF SCHOOLS ATTENDED FOR DROPOUTS AND MATCHED STAYINS (Grade 8)

Variable	Dropout Means	Stayin Means	Difference	df	t
Number Sch's. Attended	3.37	3.12	0.25	92	0.88

TABLE 86

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN AMOUNT OF PARTICIPATION IN EXTRACURRICULAR ACTIVITIES FOR DROPOUTS AND MATCHED STAYINS (Grade 8)

Activity	Dropout Means	Stayin Means	Differences	df	t
Arts & Science	9.54	10.44	0.90	84	1.67*
Sports	11.34	12.94	1.60	84	1.79*
Clubs & Service	11.50	13.26	1.76	84	2.13**

*Significant at the .05 level.

**Significant at the .01 level.

TABLE 87

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN SCORES OF ATTITUDES TOWARDS SCHOOL CONCEPTS FOR DROPOUTS AND MATCHED STAYINS (Grade 8)

Concept	Dropout Means	Stayin Means	Differences	df	t
Test	63.07	64.95	1.88	85	0.93
Math	68.77	70.05	1.28	85	0.54
Homework	57.30	60.06	2.76	85	1.15
Reading	74.83	74.83	0.00	85	0.00
English	66.99	68.71	1.72	85	0.75
Physical Educ.	73.22	75.30	2.08	85	0.85
Social Studies	68.51	69.88	1.37	85	0.61
Grades	60.41	64.07	3.66	85	1.45
Writing	70.71	71.34	0.63	85	0.30
Classmates	73.67	73.53	0.14	85	0.07
Science	68.55	72.28	3.73	85	1.49
Teachers	65.43	69.78	4.35	85	1.65
School	64.99	72.37	7.38	85	2.76***
Total	875.48	907.19	31.71	85	1.46

***Significant at the .001 level.

TABLE 88

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEAN NUMBER OF PERSONAL PROBLEMS FOR DROPOUTS AND MATCHED STAYINS

(Grade 8)

Problems	Dropout Means	Stayin Means	Differences	df	t
School	9.39	8.75	0.64	92	0.82
Money, Work, Future	7.40	6.67	0.73	92	1.06
People In General	6.80	7.24	0.44	92	0.53
Total	23.58	22.66	0.92	92	0.47

TABLE 89

NUMBER OF STUDENTS IN GROUPS LIKING EIGHTH GRADE[a]
(Grade 8)

Group	Liking of Eighth Grade Compared With Lower Grades			Total
	Better	Same	Less	
Dropouts	57(60.7)[b]	18(14.2)	9(9.1)	84
Stayins	71(67.3)	12(15.8)	10(9.9)	93
Total	128	30	19	177

[a] **Computed chi-square of 2.36 was not significant.**

[b] **Figures in parentheses represent expected frequencies.**

TABLE 90

NUMBER OF STUDENTS IN GROUPS ESTIMATING THEY WILL LIKE HIGH SCHOOL[a]

Group	Liking High School Compared With Eighth Grade			Total
	Better	Same	Less	
Dropouts	67(71.1)[b]	10(7.6)	6(4.3)	83
Stayins	83(78.9)	6(8.4)	3(4.7)	92
Total	150	16	9	175

[a] **Computed chi-square of 3.18 was not significant.**

[b] **Figures in parentheses represent expected frequencies.**

TABLE 91

NUMBER OF STUDENTS IN GROUPS REPORTING SUBJECT AREAS LIKED BEST[a] (Grade 8)

Group	Subject Liked Best		Total
	Academic	Non-academic	
Dropouts	55(51.5)[b]	38(41.5)	93
Stayins	48(51.5)	45(41.5)	93
Total	103	83	186

[a] Computed chi-square of 1.07 was not significant.

[b] Figures in parentheses represent expected frequencies.

TABLE 92

NUMBER OF STUDENTS IN GROUPS REPORTING SUBJECT AREA LIKED LEAST[a] (Grade 8)

Group	Subject Liked Least		Total
	Academic	Non-academic	
Dropouts	64(61.5)[b]	29(31.5)	93
Stayins	59(61.5)	34(31.5)	93
Total	123	63	186

[a] Computed chi-square of 0.60 was not significant.

[b] Figures in parentheses represent expected frequencies.

TABLE 93

NUMBER OF STUDENTS IN GROUPS WHO REPEATED GRADES[a]
(Grade 8)

Group	Repeated Grades		Total
	Yes	No	
Dropouts	21(21.5)[b]	60(62.5)	84
Stayins	21(23.5)	71(68.5	92
Total	45	131	176

[a] Computed chi-square of 0.00 was not significant.

[b] Figures in parentheses represent expected frequencies.

TABLE 94

NUMBER OF STUDENTS IN GROUPS WHO SKIPPED GRADES[a]
(Grade 8)

Group	Skipped Grades		Total
	Yes	No	
Dropouts	2(2.4)[b]	81(80.6)	83
Stayins	3(2.6)	90(90.4)	93
Total	5	171	176

[a] Computed chi-square of 0.00 was not significant.

[b] Figures in parentheses represent expected frequencies.

TABLE 95

NUMBER OF STUDENTS IN GROUPS REPORTING PLANS REGARDING COLLEGE[a]
Grade 8)

Group	Going to College			Total
	Yes	Undecided	No	
Dropouts	43(45.3)[b]	18(19)	23(19.7)	84
Stayins	52(49.7)	22(21)	18(21.3)	92
Total	95	40	41	176

[a] Computed chi-square of 1.39 was not significant.

[b] Figures in parentheses represent expected frequencies.

TABLE 96

NUMBER OF STUDENTS IN GROUPS REPORTING MOTHER THAT WORKS[a]
(Grade 8)

Group	Mother Works		Total
	Yes	No	
Dropouts	27(30.4)[b]	56(52.6)	83
Stayins	37(33.6)	55(58.4)	92
Total	64	111	175

[a] Computed chi-square of 1.14 was not significant.

[b] Figures in parentheses represent expected frequencies.

TABLE 97

NUMBER OF STUDENTS IN GROUPS REPORTING PARENTS LIVING[a]

(Grade 8)

Groups	Which Parents Living		Total
	Both	Other	
Dropouts	73(74.9)[b]	11(9.1)	84
Stayins	83(81.1)	8(9.9)	91
Total	156	19	175

[a] Computed chi-square of 0.85 was not significant.

[b] Figures in parentheses represent expected frequencies.

TABLE 98

NUMBER OF STUDENTS IN GROUPS REPORTING PARENTS SEPARATED[a]

(Grade 8)

Groups	Parents Separated		Total
	Yes	No	
Dropouts	23(16.2)[b]	59(65.8)	82
Stayins	11(17.8)	79(72.2)	90
Total	34	138	172

[a] Computed chi-square of 6.80 was significant at the .001 level.

[b] Figures in parentheses represent expected frequencies.

TABLE 102

OBSERVED MEAN VALUES OF TWELVE VARIABLES FOR
DROPOUTS AND RANDOMLY SELECTED STAYINS
(Grade 8)

Variables	Dropouts	Stayins	Differences
1. Lang. Stu. Sk.	4.70	6.03	-1.33
2. Father's Occ.	33.73	42.01	-8.28
3. Father's Ed.	5.18	5.92	-0.74
4. Activities: Arts & Sci.	9.62	10.32	-0.70
5. Activities: Clubs	11.56	13.07	-1.51
6. Attitude: School	66.13	76.02	-9.89
7. Attitude: Teachers	67.31	72.97	-5.66
8. Self-Estimate	3.03	3.63	-0.60
9. Hours Work/wk.	3.18	3.01	0.17
10. Absences	11.25	7.59	3.66
11. Problems: School	8.84	7.23	1.16
12. Academic GPA	1.67	2.26	-0.59

TABLE 103

DISCRIMINANT WEIGHTS FOR COMBINATIONS OF VARIABLES, D^2 DISTANCE VALUES, AND F VALUES FOR DROPOUTS AND RANDOMLY SELECTED STAYINS (Grade 8)

Variables			Weights	
1.	Lang. Stu. Sk.	X_1	-0.0009988	-0.0012741
2.	Father's Occ.	X_2	0.0000145	
3.	Father's Ed.	X_3	-0.0007768	-0.0007477
4.	Activities: Arts & Sci.	X_4	0.0000787	
5.	Activities: Clubs	X_5	-0.0001384	-0.0001542
6.	Attitude: School	X_6	-0.0001507	-0.0001641
7.	Attitude: Teacher	X_7	-0.0000008	
8.	Self Estimate	X_8	-0.0005541	
9.	Hours Work/2k.	X_9	0.0004478	
10.	Absences	X_{10}	0.0001296	
11.	Problems: School	X_{11}	0.0001296	
12.	Academic GPA	X_{12}	-0.0000764	
		D^2	0.9731	0.8534
		F	3.75***	10.26***

***Significant at the .001 level.

TABLE 104

BIRTHPLACE OF FOURTH GRADE PUPILS--DISTRIBUTION BY STATES WITH SPOKANE AND OUTSIDE OF THE UNITED STATE (N=2838)
(Grade 4)

Birthplace	Number	Birthplace	Number
Spokane	1755	Missouri	5
Washington (except Spokane)	352	Montana	89
Alabama	2	Nebraska	17
Alaska	16	Nevada	1
Arkansas	3	New Hampshire	1
Arizona	7	New Jersey	6
California	76	New York	6
Colorado	14	New Mexico	10
Connecticut	3	North Carolina	3
Delaware	0	North Dakota	24
Florida	10	Ohio	5
Georgia	5	Oklahoma	13
Hawaii	1	Oregon	61
Idaho	105	Pennsylvania	4
Illinois	17	Rhode Island	1
Indiana	4	South Carolina	3
Iowa	11	South Dakota	10
Kansas	14	Tennessee	4
Kentucky	1	Texas	24
Louisiana	7	Utah	14
Maine	2	Vermont	3
Maryland	6	Virginia	9
Massachusetts	2	West Virginia	1
Michigan	9	Wisconsin	15
Minnesota	32	Wyoming	2
Mississippi	4	Outside of the United States	49

TABLE 105

NUMBER OF SPOKANE RESIDENCES
(Grade 4 N=2820)

Number of Residences	Number of Pupils
1	2061
2	527
3	145
4	46
5	23
6	9
7	7
8	0
9	2

TABLE 106

TOTAL SCHOOLS ATTENDED
(Grade 4 N=2915)

Number of Schools	Number of Pupils
1.	1661
2.	681
3.	267
4.	99
5.	41
6.	15
7.	8
8.	7
9.	1
10.	1
11.	1
No information.	133

TABLE 107

DISTRIBUTION OF PUPILS' GUARDIAN
(Grade 4 N=2909)

Person Lives with	Number of Pupils
Father and mother	2374
Mother and stepfather	187
Father and stepmother	24
Mother	250
Father	36
Other individuals	37
Institutional care	1

TABLE 108

DISTRIBUTION OF DATE OF PARENTS' SEPARATION OR DEATH
(Grade 4 N=2902)

Length of Spearation	Number of Pupils
No separation (stated)	2572
Less than one year	4
One to two years	49
Three to five years	90
More than five years	187

TABLE 109

DISTRIBUTION OF FOURTH GRADE PUPILS REPEATING GRADES (N=2924)
(Grade 4)

Grades Repeated	Number of Pupils
None.	2741
First grade	70
Second grade.	46
Third grade	28
Fourth grade.	32
First and second grade.	0
First and third grade	1
First and fourth grade.	3
Any other two grades.	3

TABLE 110

SPECIAL REMEDIAL HELP (N=2924)
(Grade 4)

Type of Remedial Help	Number of Pupils
No remedial help.	2770
Speech.	107
Reading	17
Counseling.	1
Psychiatric	1
Home tutoring	2
Summer school	5
Speach (2 years).	18
Speech and home tutoring.	1

TABLE 111

HEALTH PROBLEMS (N=2653)
(Grade 4)

Type of Problem	Number of Pupils
No health problems.	2417
Unspecified	7
Eye, ear, nose, and throat. . . .	137
Orthopedic.	17
Excretory system	5
Gastro-intestinal system	6
Glandular system.	34
Circulatory system	21
Nervous system	9

TABLE 112

BISERIAL CORRELATIONS FOR FOUR DICHOTOMOUS VARIABLES AND SCHOLASTIC APTITUDE AND ACHIEVEMENT
(Grade 4)

Variables	LT Verbal	LT Non-Verbal	Word Know-ledge	Word Discrimi-nation	Reading	Spelling	Language	Arithmetic Compre-hension	Arithmetic Problem Solving
Health Problems	-.01	-.00	-.08	-.04	-.10	-.06	-.07	-.04	-.08
Birthplace (Spokane vs other)	-.11	-.05	-.04	-.06	-.01	-.05	-.04	-.04	-.06
Living with Both Parents	.23	.21	.20	.20	.21	.17	.19	.21	.21
Special Remedial Help	-.05	.00	-.09	-.12	-.08	-.12	-.15	-.05	-.03

TABLE 113

BISERIAL CORRELATIONS FOR FOUR DICHOTOMOUS VARIABLES AND SCHOOL RELATED EXPERIENCES
(Grade 4)

Variables	Number of Residences	Father's Occupational Level	Total Siblings	Absence, Fourth Grade
Health Problem	.02	-.11	-.03	.17
Birthplace*	.13	-.04	.04	-.02
Living with Both Parents	-.37	.46	-.04	-.09
Special Remedial Help	-.04	.04	.04	.09

*Spokane vs. other

TABLE 114

BISERIAL CORRELATIONS FOR FOUR DICHOTOMOUS VARIABLES AND MEASURES OF PERSONAL AND SOCIAL ADJUSTMENT
(Grade 4)

Variables	Personal Growth	Special Instruction	Acceptance	Use of Time	Respon-sibility	Needs Help
Health Problem	-.19	.03	-.02	-.05	-.03	.00
Birthplace*	-.01	-.23	-.39	-.37	-.37	-.24
Living with Both Parents	.16	.01	.20	.25	.24	.05
Special Remedial Help	.00	.41	.09	.03	.05	.09

*Spokane vs. other

TABLE 115

BISERIAL CORRELATIONS FOR FOUR DICHOTOMOUS VARIABLES AND FACTORS OF SCHOOL ADJUSTMENT
(Grade 4)

Variables	Grades Repeated	Reading	English	Spelling	Soc. Stud.	Arithmetic	Science	Music Art	Phys. Ed.	Health	Reader Level
Health Problem	.01	-.21	-.22	-.22	-.18	-.19	-.20	-.18	-.18	-.19	-.02
Birthplace*	.01	.00	-.00	.00	-.02	-.03	-.02	.01	-.01	-.01	-.36
Living with Both Parents	-.12	.4	.15	.14	.14	.17	.13	.10	.12	.11	.24
Special Remedial Help	.05	-.02	-.01	-.05	-.00	.01	.02	.01	.05	.00	.01

*Spokane vs. other